HORTICULTURAL ABSTRACTS

INDEX TO

VOLUME XXVI

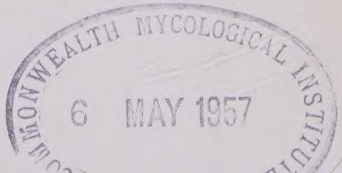
1956

Compiled and issued quarterly since 1931 by the

COMMONWEALTH BUREAU OF HORTICULTURE AND PLANTATION CROPS

EAST MALLING, KENT, ENGLAND

EDITOR: D. AKENHEAD, O.B.E., M.A., B.SC.



Digitized by the Internet Archive
in 2025

https://archive.org/details/horticultural-science-abstracts_1956_26_index

INDEX OF NAMES

Horticultural Abstracts, Vol. XXVI

A., P., 379
Aalders, L. E., 130
Aalsmeer Research Station for Floriculture, 2950
Aase, H. C., 1837w
Abadía, A., 3469
Abbas, H. M., 2103
Abbiss, H. W., 1995
Abbott, D. L., 144, 201, 3363
Abdelal, A. F., 257
Abe, S., 645, 1947
Abel, A. L., 3693a
Abraham, P., 803, 3939a
Abramov, N. T., 260a
Abramsky, M., 1068a
Abruña, F., 2152
Academic Press Inc., 2335
Acireale, Stazione Sperimentale di Agrumicoltura e Frutticoltura, 1283
Ackerman, W. L., 2571
Adamanis, F., 1920
Adams, D. F., 2348
Adams, R. E., 396
Adams, S. N., 2175, 2179
Adamson, R. M., 3634
Addicott, F. T., 48, 1335
Admont—see also Gumpenstein—Bundesanstalt für alpine Landwirtschaft, 524
Adriance, G. W., 1236
Adsuar, J., 1730, 1848, 3171
Agarwala, S. B. D., 2279
Agharkar, S. P., 2305a
Agulhon, R., 2607
Ahlgrimm, E.-D., 3904
Ahmad, N., 1647, 3907
Ahmad, S. M.-D., 1068q
Ahmadi, A. A., 67
Ahmed, M. B., 3468
Ahrendt, L. W. A., 3041a
Ahtarov, B., 1068v
Ahuja, M. R., 4127q
Ahunbaeva, B. O., 3939q
Akabane, N., 2566
Akamine, E. K., 2222
Akers, T. J., 3855a
Akesson, N. B., 2965
Akhtar, M. M., 4228, 4229, 4231
Akmal, M. M., 4090, 4231
Akour, A. A., 854
Aksu, S., 774, 781
Alabouvette, L., 2942
Alban, E. K., 2705, 2710, 2714
Alben, A. O., 3471
Albert, W. B., 2700
Alberta Department of Agriculture, 1285a
Alberta Horticultural Advisory Committee, 2015, 3315a
Albuquerque, S. D. S., 2909
Alcalde, A. J., 1551
Alcaraz Mira, E., 1850
Alcorn, S. M., 3041b
Alderfer, R. B., 310
Alderman, D., 3365
Aldrich, D. G., 2087
Aldrich, R. J., 480, 486, 496, 513, 523a, 2737a, 2737r, 3620, 3678
Aldrich, T., 3465
Alexander, L. J., 2843
Alexandrowicz, L., 1083
Algérie, Gouvernement Général, 3208
Ali, M., 3058
Ali, N., 2503o
Ali, R., 4060
Ali, S., 1235t, 2074, 2213, 3058, 3095, 3103
Aliev, A. G., 3623
Alkmaar, Proefstation voor de Groenteteelt in de Volle Grond in Nederland, 3699
Allan, H. R. M., 311
Allard, R. W., 2865f
Allen, A. S., 2759
Allen, E. F., 1101
Allen, H. P., 3599
Allen, O. N., 1941
Allen, W. W., 464, 465
Allerton, F. W., 117a, 1808
Allington, W. B., 1888
Allison, R. V., 1929
Allman, S. L., 4093
Allwood, M. C., 974a
Almeida, C. R. Marques de, 64
de Almeida, L. L., 2948a
Almindelig Dansk Gartnerforening, 3209
Almon, L., 571
Almond, F. L., 477
van Alphen, T. G., 1468a
Alston, R. E., 3041c
Alves, A., 4156
Alvey, N. G., 13
do Amaral, S. F., 4254a
Amarell, H., 1842
Amateur Gardening Handbooks, 4294a
Amelinckx, F., 3193
Amelinckx, S., 3193
American Association of Nurserymen, 901
American Phytopathological Society, Ornamental Crops Subcommittee, 3946
Amin, E. S., 3939b
Amsen, M. G., 252
Amstutz, F. C., 445 l
Amy, A., 2720
Anagnostopoulos, P. T., 2136, 2148a, 4116, 4118
Ananda Rau, S., 4246
Anandan, A. P., 3191 l
Anandaramiah, M. R., 1954a
Andersen, A. L., 2798, 3754, 3855b
Andersen, A. M., 925
Andersen, G., 974b
Andersen, H., 3234a
Anderson, D. M. W., 2864a
Anderson, D. R., 663
Anderson, J., 3648, 4254b
Anderson, M. S., 3291
Anderson, O. E., 1689
Anderson, P. J., 3884
Anderson, P. M., 439
Anderssen, F. G., 2739
Andeweg, J. M., 2864b, 2864c
Ando, Y., 1954b
Andrade, A. C., 2105
Andreae, W. A., 60, 1374a
Andrén, F., 2670a
Andrewartha, H. G., 1285b
Andries, E., 805
Andries, H. J., 2746
Anet, E. F. L. J., 259
Anet, F. A. L., 865a
Angeli, L., 2860, 2864d
Angelini, P., 2494
Angell, H. R., 383
Angus, D. E., 3480
Anjou, K., 243
Anon., 8, 136, 137, 269, 287, 326a, 429, 431, 445a, 466,

494, 664, 740, 752, 779, 800, 802a, 802b, 802c, 802d, 802e, 845, 846, 856, 859, 865b, 974c, 974d, 1024, 1068b, 1068c, 1068d, 1089, 1158, 1169, 1190, 1234a, 1234b, 1234c, 1234d, 1234e, 1293, 1365, 1366, 1450, 1547, 1640a, 1668, 1675a, 1684, 1717, 1722, 1789, 1794, 1891, 1903a, 1903b, 2001, 2026, 2053a, 2148b, 2148c, 2156, 2160, 2295, 2305b, 2408, 2411, 2412, 2419, 2428, 2495, 2514, 2528, 2620, 2670b, 2676, 2677, 2724, 2737b, 2777, 2864e, 2890, 2916, 2940, 3025, 3041d, 3041e, 3041f, 3061, 3132, 3141, 3159, 3191a, 3191b, 3191c, 3191d, 3313, 3359, 3397, 3408a, 3597a, 3673, 3693b, 3697, 3837, 3849, 3855c, 3855d, 3903, 3941, 3988, 4030a, 4129, 4130, 4154, 4155, 4250, 4254c, 4254d
Anquez, M., 4286
Anstey, T. H., 1710
Antcliff, A. J., 294, 295, 1497
Anthon, E. W., 2627
Antipov, V. G., 2961
Antoine, R., 3170, 3172, 3173, 3174
Antoniani, C., 260b, 3407
Antonio, R. P., 2622
Antunes (Filho), H., 4157, 4159, 4162, 4163, 4165, 4254i
Anzalone, L., Jr., 3027, 3028
Aoba, T., 3779
Aoki, N., 3347
Aomori Apple Experiment Station, 260c
Appleman, D., 2370
Aragaki, M., 1058
Araújo, J. E. G., 1289
Archer, B. L., 2244, 2245
Archibald, J. A., 3453
Archibald, J. F., 1097, 2171, 2172, 2179
Aref, H., 3855w
Arey, W. J., 3052
Argentina, 3210
Arhipov, F., 937
de Ariño, A., 1468b
Arisumi, T., 2222, 3154
Arizona Agricultural Experiment Station, 3234b
Ark, P. A., 1555, 2589, 3041b
Arle, H. F., 2684
Armstrong, T., 400
Armstrong, W. C., 260d
Armstrong, W. W., 1040
Armstrong, W. W., Jr., 4051
Army, T. J., 2767
Arnaud, J., 2888
Arnaud, R., 1524
Arney, S. E., 1480, 2531, 3428
Arnold, W., 2809
Aróstegui, F., 2305c
Ar-Rushdi, A. H., 1843
Arthur, H. R., 1910
Arthur, I. P., 115
Artozoul, J., 2558a
Arzolla, J. P., 3138
Ash, A. S. F., 259
Ashby, D. G., 3599
Ashby, W. C., 702
Ashcroft, R. T., 3280
Ashizawa, M., 190
Ashton, F. M., 1199
Ashworth, de B., 445s
Ashworth, P. R., 715
Askew, H. O., 3867
Asquith, D., 401, 3546
Asthana, S. N., 3146
Astrego, J. J., 934
Atkins, C. D., 4128h
Atkinson, J. D., 160, 355, 3491
Attygalle, A. B., 3862
Aubert, P., 166, 1439
Audus, L. J., 1339, 1372, 1374b, 3315b
Austin, M. D., 1629
Australia, Commonwealth Dried Fruits Control Board, 1468c
Australia, Commonwealth Scientific and Industrial Research Organization, 207, 309, 749, 1258, 1607
Australian Canned Fruits Board, 2340a
Åvall, H., 2865m, 3772
Avens, A. W., 2857, 3549
Avent, K. L., 1413, 2558b
Avidor, Z., 1055
Avigdorov, A., 3548
Avila, A., 1831
Avramov, L., 2558c, 3448, 3449
Axelrod, B., 1472, 2127
Aycock, R., 590, 2830
Ayers, E. L., 4127a
Ayers, R. S., 81
Ayers, T. T., 1768, 1770
Ayres, A. S., 2260
Ayres, G. C. de M., 4254e
Aytoun, R. S. C., 2816
de Azevedo, A. R., 2148d, 4122
Azmy, Y. H., 1837a
Azzi, G. M., 3191e

B., M., 3564
B., W., 2281
Babenko, V. I., 3068
Bacchi, O., 4164
Bachelder, S., 3498
Bachy, A., 3153
Badcock, W. J., 2305d
Bader, C. J., 4186
Badhwar, R. L., 3898
Baggiolini, M., 1603, 1611, 2649
Bahtadze, K. E., 3179
Baïda, H. S., 2864f
Bailey, G. F., 3097
Bailey, J. F., 2811
Bailey, L. F., 185
Bailey, N. T. J., 1291
Bain, H. D., 1403
Baird, J. V., 1922
Bajwa, B. S., 155, 3051
Bakarcic, M., 330
Bakbier, G., 2364
Baker, J. E., 3284
Baker, K. F., 928, 3306
Baker, L. A. E., 1797
Baker, V. H., 1345
de Bakker, G., 2415a
Bakker, J., 3009
Bakthavathsalu, C. M., 1080
Balasubramanyam, G., 1838a
Balcar, J., 734, 802f, 1237
Bald, J. G., 2998, 3010, 3979
Baldacci, E., 1510a, 1570, 3578
Baldini, E., 2132, 2144, 3117, 3355
Ball, C. D., 3871
Ball, C. O., 1832
Ball, E., 38
Ball, V., 2955
Ballatore, G. P., 3454
Balls, A. K., 2375
Balls, W. L., 2958
Bally, W., 1927
Balsgård, Society for Fruit Tree Breeding, 2421, 4271
Baltazar, E. P., 3939c
Bancroft, J. B., 2891, 2892
Bandurski, R., 4200
Banerjee, S. N., 3853
Banes, D., 1909
Banfield, G. L., 2737c
Banga, O., 573, 1837b, 2823, 2864g, 3795
Banta, E. S., 428
Baptist, B. A., 4247
Baptist, E. D. C., 1234f
Baptista, M., 1234g
Barakat, M. Z., 2126
Baran, W., 509
Barat, H., 4257
Barbados, B.W.I. Central Sugar Cane Breeding Station, 1193
Barber, H. N., 607
Barca, P., 3408b
Bardin, R., 3807
Bareither, M. J., 4031n

Barker, P. A., 2695, 2696, 3641, 3643, 3691, 3952
Barlow, H. W. B., 2448
Bärner, J., 1511
Barnes, D., 1837c
Barnes, D. F., 3588
Barnes, H. F., 2340b
Barnes, M. M., 3463
Barnes, W. C., 732a
Barnhart, D., 974n
Barr, H. E., 405, 3595
Barrau, J., 3191t, 3854
Barret, J., 974e
Barreto, R., 2251, 2278
Barrett, A. E., 1856, 2320
Barrett, T., 1766
Barskiĭ, Ja. S., 2558d
Bartels, W., 1889
Bartley, B. G. D., 1092, 1234h
Bartley, C. E., 3498
Bartolucci, A., 801, 2906
Barton, L. V., 554, 834
Basson, W. J., 2071, 2072
Basteleus, R., 4030b
Basu, A. N., 3853
Batchelor, L. D., 3119a
Bateman, J. K., 1837d
Bate-Smith, E. C., 2053b
Bates, G., 3645
Bates, J. F., 3612, 4227
Bates, T. E., 756, 1862
Bathis, E. S., 4118
Batjer, L. P., 3374, 3379
Batra, B. M., 767
Battaglini, M., 3855e
Bauckmann, M., 443
Baudel, J., 2558a
Bauer, R., 267, 1550
Baughn, C. G., 1802
Baumann, G., 1538, 3491
Baumeister, G., 3512
Baumgartner, L. L., 463
Bauserman, H. M., 28
Bawden, F. C., 802g
Baxter, L. W., 3027, 3539
Baxter, P., 186, 338
Bayer, G., 3652, 3661
Bazán de Segura, C., 3844
Beach, W. S., 724
Beakbane, A. B., 2440
Bean, R. C., 1744
Bean, W. J., 2307
Bear, F. E., 2361
Beard, F. H., 1930
Beare, J. A., 120
Beattie, J. M., 1501, 2551
Beatty, R. H., 464, 465, 490, 2686, 3693f
Beaufils, E. R., 1182, 3158
Beaulieu, A. A., 1601
Beaumont, J. H., 4177
Bebić, D., 189
Bećarević, A., 213, 3382
Beck, G. E., 3041g, 4030c
Beck, J., 2597
Becker, R. F., 3496
Beddall, J. L., 3725
Bedford, C. L., 1451
Beecher, F. S., 581, 3742
Beeke, H., 2670u
Beery, L. A., Jr., 2305e
Beevers, H., 865c, 1374j, 2948b
Behrens, W., 974f
Beijer, J. J., 919
Beimler, R., 2889, 3868
Beingessner, H. F., 2439
Beingolea G., O., 4123
Belgraver, W., 2969
Bell, H. K., 1520
Bell, H. P., 1471, 2041
Bell, W., 2750
Bellamy, M., 1068e
Belohonov, I. V., 127
Bembower, W., 3191f
Benas, G., 2670h
Benavides G., M., 3770
Benazouz, O., 2030
Bendix, S., 3824
Benedict, C., 501
Benedict, H. M., 26
Benedict, R. A., 948
Beneš, V., 665, 732b
Benitez Bejarano, A., 3693c
Benjaminsen, J., 117b
Benn Brothers Limited, 2321
Benne, E. J., 3315c, 3315d
van Bennekom, J. L., 573, 3795
Bennett, R. R., 2872
Bennett, S. H., 409, 1632, 3585, 3597b
Benson, N. R., 1640b
Benstead, R. J., 1104, 1116, 2174
Bental, A., 4080, 4081
Bentley, J. A., 3315g, 3315r
Bentley, J. P. N., 4254f
Benzian, B., 4181
Benzoni, F., 2948q
Beran, F., 1626, 3211
Bérczy, L., 3135
Berend, I., 2604
Berezova, E. F., 541
Berezovskiĭ, M. Ja., 493
Berg, J., 4024
Berger, K. C., 2746
Berger, P., 1883
Bergeson, G. B., 921
Bergman, E. L., 3470
Bergman, R. J., 2393
Bergmann, W., 80
F. W. Berk & Co. Ltd., London, 2800
Berkan, H., 326b
Berkeley, G. H., 359
Berlati, M., 1510b
Bernal, D. E., 1234i, 3191g
Bernaldo de Quirós, A. G., 3945
Bernhard, R., 3491
Bernheimer, A. W., 1313
Berninger, L. M., 3041g, 4030c
Bernlohr, R., 3835
Bernstein, L., 81
Berný, M., 643
Berrill, F. W., 2227
Berry-Smith, F., 288
Bertholdi, R. E., 822
Bertoli, P., 202
Bertossi, F., 2415b, 2415c
Bertrand, G., 1374c
Bervillé, P., 2760
Besemer, A. F. H., 440, 445b
Bess, H. A., 591
Bestagno, G., 1976
Betz, A., 1374d
Beutel, J. A., 2148e
Bevan, C. W. L., 2948c
Bewley, W. F., 1374e
Beyers, E., 2047, 3460
Bhagchandani, P. M., 1771
Bhagwat, R. V., 2128
Bhandari, M. M., 2053c
Bhat, S. S., 2310
Bhatia, B. S., 1953, 3186
Bhatia, D. S., 3192o
Bhatia, I. S., 865d
Bhatnager, G. S., 962, 3041h
Bhatnagar, V. B., 676
Bhatt, R. S., 3146
Biale, J., 3047
Biale, J. B., 1068a, 2415u, 4099
Bianchedi, A., 1407
Biddulph, O., 3315e
Biddulph, S. F., 2365, 3315
van der Bie, G. J., 2241
Biezanko, C. M., 821
Biggs, R. H., 50, 3902
de Bijl, D., 3350
Bilbruck, J. D., 2663
Bilgrami, K. S., 2215
Billingsley, H. D., 3379
Bills, G. T., 1764
Bing, A., 1966, 3637, 3956
Bingham, F. T., 2065, 2087, 3044
Biologische Bundesanstalt für Land- und Forstwirtschaft Braunschweig, 1512
Birch, L. C., 1285b
Birchfield, W., 4094
Birkett, L. S., 1194, 1234j, 4209
Biron, M., 284
Bishop, C. F., 1712
Bishop, C. J., 130
Bishop, J. C., 652, 3855v
Bishop, L. R., 842, 1936
Bisset, D. A., 863
Bisset, N. G., 865e
Bisson, J., 1510c
Bistline, F. W., 3052, 4094
Bitancourt, A. A., 4072

Bitters, W. P., 2076, 3119a
Bivins, J. L., 515, 523b
Black, W. A. P., 865f, 1954c
Blackburn, F. H. B., 4230
Blackett, R. D., 2704
Blackhurst, H. T., 587
Blackith, R. E., 2815, 3768
Blackman, G. E., 3756
Blackmon, G. H., 1507, 2145
Blair, D. S., 164, 2439, 2477
Blake, C. E., 254
Blake, J., 888
Blanc-Aicard, D., 1374f, 2540
Blank, H. G., 2496
van Blaricom, L. O., 1635
Blasdale, W. C., 922
Blasse, W., 1468d, 3408c
Blaszyk, P., 2734
Bleasdale, J. K. A., 3655
Bledsoe, R. W., 1857
Bleton, C., 117c
Block, S. S., 3773
Blodgett, E. C., 2603, 2671w
de Blois, P., 2053d
Blommaert, K. L. J., 301, 3488
Blommers, J., 273
Blondel, —., 3072, 3076
Bloodworth, M. E., 117d
Bloom, J. R., 723
Bloomfield, J. S., 2489
Blouch, R. M., 2737h
Blumer, G., 2864x
Blumer, S., 2575, 3491, 3597d
Blunck, H., 419, 3194
Boalch, D. H., 3233
Bobb, M. L., 2670c
Bobo, H., 1572
Bobrov, R. A., 662
Bobula, P. F., 475
Bock, K. R., 4170
Bodard, M., 3191h
Boek, K., 3597c
Boelema, B. H., 1731
de Boer, S., 71, 152, 4008
Bognár, K., 2550
Bogorad, L., 677
Böhm, H., 416
Böhm, O., 2774
Bojarkin, A. N., 2372
Böjthe, G., Jr., 2879
Boke, N. H., 2053e
Bolaños, C. W., 1119, 4146
Bolas, B. D., 1416, 2401, 2447
Bolay, A., 290, 1491
Bolhuis, G. G., 1234k
Boll, H. L., 2558e
Boll, W. G., 1340
Bollard, E. G., 1515
Bolle-Jones, E. W., 1184, 3159
Bolli, M., 2045, 3261
Bologna, L. M., 1234 l
Bolsunov, I., 737, 738, 739, 751, 2875
Bolton, A., 802q, 1858, 3863
Bömeke, H., 197, 340, 345, 1464, 3366, 3408d
Bond, G., 2039, 3937
Bonde, E. K., 1804, 3825
Bongiovanni, G. C., 1614
Bonnemaison, L., 2650
Bonner, J., 3255
Bonner, W. D., 36, 616
Bonnet, J., 837
Booth, V. H., 3789
Borck, B., 281, 1436
Bordas, J., 2053f
Bordignon, S., 326d
Borenstein, B., 1832
Borg, Å., 2864h
Borisovskiĭ, N. Ja., 2543
Bornás y de Urcullu, G., 3236
Borthwick, H. A., 961, 3315m, 4167
Borzini, G., 2610
Bose, S., 865g
Boselli, F., 3113
Boskoop, Proefstation voor de Boomkwekerij, 3943
Bosley, D., 3041i
Boswell, V. R., 547
Botham, J. R., 2119
Botting, G. W., 224
Bottini, E., 2503a
Bouat, A., 2137
Boubals, D., 1572, 2607, 2613
Bouchard, C., 1617
Boucher, M., 4254g
Bouhelier, R., 720
Bould, C., 337, 2358, 3418, 3467
Bouma, D., 997, 4044
Bourgin, G., 748
Bourne, C. L. C., 4209
Bouscary, A., 885
Boush, G. M., 3885
Bouthillon, J., 1177, 1178, 1185, 1186
Bouyoucos, G. J., 2413
Bovey, R., 3597d, 3597e
Boving, P. A., 2357
Bowen, H. J. M., 3288, 3289, 3315f
Bowen, T. J., 286
Bowers, F. A. I., 4177
Bowman, F. T., 260e
Boyce, A. M., 4109
Boyes, W. W., 237
Boyle, J. S., 2850, 2864i
Boynton, D., 2165
Braak, J. P., 145, 3792
Brachet, J., 2376
Bradfield, E. G., 337, 3418
Bradt, O. A., 2460, 2468, 2479
Bradley, G. A., 653
Bramble, W. C., 470
Brammell, W. S., 3315d
Branas, J., 1510d
Brandall, J. H., 974g
van den Brande, J., 1998
Brandenburg, E., 563
Brannon, D. H., 331
Braudeau, J., 1094
Braun, A. C., 802v, 2896
Braun, A. J., 1640i
Braun, W., 1073
Bravenboer, L., 402, 583, 726, 2828
Brazilian Government Trade Bureau, 852
Breakey, W. J., 2698
Breazeale, E. L., 96, 1352, 1806
Brebion, G., 3597f
Breen, W. H., 26
Bregoff, H. M., 1780
Bremer, H., 351, 385, 625, 632, 655, 1837e, 3713
Brenchley, G. H., 903
Brendler, R. A., 3734, 3804
Bressler, R. G., 2503m
Brett, C. H., 630
Bretthauer, G., 3392
Breves, J., 1374g
Breviglieri, N., 1483, 4127b
Brewer, D., 3855f
Brewer, R. F., 3246
Brežnev, D. D., 3817
Brian, P. W., 609, 3511
Briccoli Bati, M., 4117
Bridgman, F., 3041j
Brien, R. M., 1837f
Brierley, P., 917, 965
Brierley, W. G., 1399
Brightwell, W. T., 265
Brimblecombe, A. R., 3156
Brind, W. D., 3200
Brindley, T. A., 2806
Bringhurst, R. S., 2506
Brison, F. R., 1236
British Columbia Department of Agriculture, 1285c, 2322, 3234c
British Guiana, Director of Agriculture, 4294b
The British Society for Research in Agricultural Engineering, 2336
Brittingham, W. H., 1677
Britton, G., 3315g
Briza, K., 2558c, 3441, 3443
Broadbent, J. L., 2948c
Broadbent, L., 3726
Broadfoot, H., 3492
Brock, R. B., 1489, 2558f
Brockie, W. B., 2053g
Brod, G., 1645
Broekmans, A. F. M., 3150
Broertjes, C., 974h
Broeshart, H., 3152, 4182
Brogdon, J. E., 3119b
Bronšteĭn, I. A., 2416a
Brooke, J., 2308
Brooks, A. N., 1582, 1653

Brooks, F. A., 3482
Brooks, R. M., 1393, 3325
Brooks, T. L., 2113, 2114
Brookson, C. W., 3191i
Brossier, J., 1420, 2558g
Brouwer, R., 2415d
Brouwer, W., 1238
de Brouwer, W. M. T. J., 569, 1716
Browicz, K., 2948d, 3041k
Brown, A. G., 1394
Brown, A. W. A., 1622
Brown, D. R., 255, 660
Brown, D. S., 1433
Brown, E. B., 425, 4030d
Brown, F. A., Jr., 40
Brown, G. B., 706, 3571
Brown, J. C., 1348, 3286
Brown, J. G., 117e, 339, 3465
Brown, J. W., 661
Brown, N. C., 3939d, 3939e
Brown, R. T., 1066
Brown, T. E., 34
Brown, T. R., 1042
Browne, F. S., 3658
Brubaker, R. W., 630
Bruce, A. B., 4017
van den Bruel, W. E., 2757
Bruhn, C., 2005
Bruni, B., 1510e, 3456a, 3456b
Bruns, V. F., 2711, 3611
Brunskill, R. T., 114
Brunson, M. H., 1610
Brusca, J. N., 1001, 2056, 2058, 2059, 2088, 4033, 4049, 4112
Bruyn, J. W., 2823
Bry, R. E., 1598
Bryden, J. D., 2558h
Bryn Adda Horticulture Demonstration Station (N.A.A.S.), 4294o
Buchholtz, K. P., 452, 2737d, 3605
von Buchwald, A., 1119, 2173
Buddenhagen, I. W., 369
Budzier, H. H., 3728
Buell, E. P., 2142
Buhl, C., 563
Buishand, T., 596, 599
Bukowski, T., 2810
Bulatović, S., 3479
Bulgakov, M. V., 3487
Bull, R. A., 2217, 3134
Bullis, D. E., 3914
Bullock, R. M., 415
Bulman, G. R. W., 746
Bulstrode, P. C., 253
Bundessortenamt, Rethmar, 2517, 2524, 2525
Bünemann, G., 3989
Bünning, E., 3315h
Bünzli, G. H., 795, 1898
Burchfield, H. P., 445c
Burchill, J., 1471, 2041
Burgaud, —., 3519
Burger, A. M., 825
Burgis, D. S., 2707, 2753
Burgos L., J. A., 4139
Burgue, F., 2053h
Burk, L. G., 3878
Burke, D. W., 2864j
Burke, J. H., 2148f, 4127c, 4127d
Burkholder, W. H., 2908d
Burle, —., 1093
Burle, L., 2305f
Burlew, J. S., 861
Burr, G. O., 2259, 2264, 2305g
Burroughs, L. F., 178
Burt, E. O., 2682
Bush, R., 3506
Businger, J. A., 110, 2403
Bussmann, A., 336, 3315i
Butcher, F. G., 3073, 3143
Butijn, J., 1437, 1447, 3387
Butt, D. J., 3597g
Butters, R. E., 3836
Büttiker, W. W., 795, 1898
Büttner, G., 3922
Buttress, F. A., 2309
Buxton, E. W., 1837g
Buyckx, E., 1122
Buzacott, J. H., 1211, 1663, 4254h
Buzulin, G. S., 588
Buzzell, A., 2908f
Byass, J. B., 1370
Byerrum, R. U., 777, 2884, 3871
Byrde, R. J. W., 366, 375, 1189, 2656, 3502, 3517
Byrnes, W. R., 470

Cabanillas, E., 4086
Cabral, M. C. de M., 393
Cadillat, R., 2161
Cadman, C. H., 360, 566, 2579
Caffrey, D. J., 2866i, 2908a
Cahoon, G. A., 988, 990, 4030e
Čailahjan, M. H., 117f, 2372
Caillavet, H., 2503b, 2503c
Cain, J. C., 215, 333
Calavan, E. C., 1012, 2094, 3079, 3083
Calderón, J. R., 4150
California Department of Agriculture, 1255
California Fig Institute, 1384, 2503d
Calman, W. M., 1191
Calvert, A., 700, 2848, 3823
Camargo, J. C., 2105
Cameron, C., 1194
Cameron, S. H., 995
Cameroons Development Corporation, 4272
Campaignolle, J., 1177, 1178, 1185, 1186
Campana, R. J., 2043
Campbell, A. I., 167, 3346
Campbell, J. A., 2570, 3598d
Campbell, J. D., 2744
Campbell, J. E., 3724
Campbell, L., 3855z
Canada Department of Agriculture, 3229, 4294d
Canada, Minister of Agriculture, 1513, 1514, 1698, 2323
Cancellieri, M. B., 1068t, 2133
Candela, M. I., 3721
Canecchio (Filho), V., 3921
Canham, A. E., 99
Canisius, J. J., 181
Cann, G., 1535
Cann, H. J., 2157
Cannon, H. B., 2439
Cannon, R. C., 2227
Canterbury Agricultural College, 2340c
Cantillon, P., 741
Cantrill, K. O., 1068f, 3855g
Caparas, J., 1973
Čapek, A., 2826
de Capite, L., 1326, 1781, 2377, 2381
Capó, B. G., 2257
Capozzi, A., 2386
Cappaert, A., 2840
Capria de Fleitas, M. H., 3440
Caprio, J. M., 4065
Cardeñosa Barriga, R., 2305h
Carena, A., 4149
Carew, J., 732c, 1253
Carleton, R. M., 2733
Carlson, R. F., 472, 473, 1408, 2692, 2693
Carlsson, G., 3986
Carman, G. E., 1068g, 3093, 4092
Caro, J. A., 4030f
Carol, J., 1909
Caroselli, N. E., 3931
Carpenger, B. E., 4030g
Carpenter, T. R., 913
Carr, A. R., 1837h
Carr, D. J., 117g
Carr, W. R., 2299
Carra, P., 2030, 2040, 3041 l, 3949
Carrera, C. J. M., 1954d
Carruba, E., 3064
Carter, G. H., 2503e
Carter, J. C., 949
Carter, L. P., 545
Carter, M. V., 1561
Cartledge, E. G., 2864k
Cartwright, R. A., 260f, 4255q
Carvalho, A., 4157, 4159, 4162, 4163, 4165, 4254i

Casarini, B., 2661, 2662
Casida, J. E., 445d, 2864 l
Cass, L. M., 1714
Cassidy, P. H., 1027, 1028
Castaño A., J. J., 4171
Castberg, C., 232
Castorina, S., 2134
Castronovo, A., 658, 1737, 1831
ten Cate, H. R., 2454
Cathey, H. M., 974i, 2973, 3966
Catlow, E., 3411
Cavell, A. J., 117h
Caveness, F. E., 918
Cawthron Institute, N.Z., 711, 758, 838, 839, 840, 1256
Čečuk, S., 2542
Ceĭtlin, M. G., 2549
Central Experimental Farm, Ottawa, 3212
Central Tobacco Research Institute, Rajahmundry, 802h, 802i, 802j
Cerbulis, J., 1126, 1506
Cerevatenko, A. S., 128
Cerighelli, R., 2305i
Černenko, E. S., 2423
Černenko, S. F., 2423
Cerny, J., 2498
Červjakov, P., 649
Cessac, M., 2761
Ceylon Coconut Research Board and Institute, 2194, 2195, 2305j
Ceylon, Director of Agriculture, 1257
Chabert, E., 1574
Chabert, G., 3041m
Chacravarti, A. S., 1206
Chadwick, L. C., 2695, 2696, 3641, 3642, 3643, 3689, 3691
Chaffard, M., 2690
Chakrabarty, M. M., 2147, 2948t
Chakrabarty, S. R., 2147
Chakravarty, H. L., 1679
Chakraverti, D. N., 2053i
Chaltin, G., 2864m
Chamberlain, G. C., 2670d
Chamberlain, W. F., 1829
Chambers, W. D., 3642, 3643, 3689, 3691
Chambionnat, A., 3315j
Chaminade, R., 1234m
Champel, P., 2183
Champion, J., 1084
Champoopho, A., 3191f
Chan, A. P., 892, 2949
Chandler, C., 833, 834, 2981
Chandler, F. B., 326c
Chandler, P. A., 3010
Chandler, S. C., 2640
Chandler, S. E., 3939f
Chandra, P. P., 2247
Chandra, V., 2923
Chant, D. A., 1588
Chaplin, C. E., 3622
Chaplin, P. H., 891
Chapman, C. I., 3700
Chapman, H. D., 1003
Chapman, P. J., 2630
Chapot, H., 980, 2078
Chappell, W. E., 2721, 3693d
Charles, F. M., 1563, 2589
Charpentier, L. J., 4254j
Charter, C. F., 2178
Chasset, H., 384
Chattopadhyay, S. B., 3191j
Chaturvedi, M. D., 3191k
Chaudhri, I. I., 816
Chaugule, B. A., 1773
Chaumier, P., 102
Chayen, J., 2010
Cheal, W. F., 391
Cheema, G. S., 2310
Cheney, P. W., 3598e
Cheshunt Experimental and Research Station, 4294e
Chetwynd, K. J., 1356
Chevassus, —., 3855u
Cheveley, S., 2415e
Chhada, T. R., 155
Chiang, M. N., 3128
Chichester, C. O., 278
Child, R., 2305k
Childers, N. F., 865h, 3462
Childerstone, W. J., 4254k
Childs, J. F. L., 3081, 3082
Childs, J. M., 3644
Childs, W. H., 347, 682
Chilean Nitrate Educational Bureau, Inc., 3195
Chilton, S. J. P., 2728
Chimonides, S. J., 326a
Chinloy, T., 2263
Chippendale, F., 1695
Chisholm, D., 548
Chisholm, M. J., 3041n
Chládek, M., 3893
Cholnoky, L., 3855h
Chorin, M., 4083
Chouard, P., 4
Choudhri, R. S., 676, 3852
Choudhuri, H. C., 3614
Choudhury, B., 696, 732s, 3816
Chowdhury, S., 1013, 2100
Chrestian, P., 2635
Christ, E. G., 1510f, 1510g, 3419, 3456c
Christensen, M., 2865 l
Christie, J. R., 2018
Christopher, E. P., 3401
Chroboczek, E., 558
Chryssoheris, F. P., 322, 4118
Chughtai, I. D., 3698, 3855q
Cibes, H. R., 2720, 3462
Ciferri, O., 1674
Ciferri, R., 736, 1518, 2138, 2139, 2864n, 3111, 3491
Cilli, L. M., 1050
Cipolla, G., 1954d
Čirkovskiĭ, V. I., 2880
Clancy, D. W., 3576
Clark, B. E., 77
Clark, E. L., 445e
Clark, F., 1851, 1857
Clark, J. E., 3268
Clark, K. G., 712
Clark, M. R. M., 2989
Clark, P. J., 405, 3595
Clarke, G. M., 375, 445f, 1636, 3502, 3522
Clarke, W. S., Jr., 2426
Clausen, C. P., 3597h
Claypool, L. L., 223, 3406, 3481, 3587
Clayton, C. N., 361, 3461, 3514
Clayton, E. E., 742
Clemente, L. J., 3750
Clements, H. F., 2265, 2305 l
Clements, R. L., 3930
Cleppa Park Horticulture Demonstration Station (N.A.A.S.), 4294o
Closs, R. L., 116
Clum, F. M., 3947
Cochran, J. H., 1829
Cochran, L. C., 1547
Cochrane, D. G., 2737o
Cockbain, E. G., 2245
Cocoa, Chocolate and Confectionery Alliance, 2162
Coe, D. M., 584
Coe, F. W., 1956
de Coene, R., 4133
Coggeshall, R. G., 2032, 2046
Coghill, K. J., 3457
Cohen, A., 4037, 4097
Cohen, M., 1047, 4128c
Colby, A. S., 2558e
Cole, H., Jr., 3014
Cole, J. R., 2670e
Cole, J. S., 784, 1640c
Coleman, R. J., 2211
Coles, G. V., 1189
Čolič, M., 3566
Coll, E. E., 1208, 2253
Collings-Wells, L. J., 1195
Comber, R., 3736
Combes, R., 4287
Combret, R., 2503f
Combs, O. B., 2866e
Comegys, W. R., 3500
Comité National pour l'Étude de la Culture Fruitière, Belgique, 1382, 3368
The Commercial Grower, 1361, 2407, 3320
Commonwealth Economic Committee, 828, 1376

Commonwealth Mycological Institute, 1282
Commonwealth Scientific and Industrial Research Organization, Australia, see C.S.I.R.O.
Compagnon, P., 2234
Complin, J. O., 2109
Comuzzi, A., 326d, 1510h, 2558i, 3456c
Conagin, A., 4161
Conagin, C. H. T. M., 4158
Condit, I. J., 1406, 3332
Congdon, N. B., 1426
Connecticut Agricultural Experiment Station, Storrs, 1826
Conner, E. C., 3492
Connors, C. H., 3041o, 3041p
Conover, R. A., 721, 2864o
Conroy, R. J., 1733
Constable, D. H., 1180, 1181, 4254 l
Constantinescu, H.-J., 927
Converse, R. H., 2615
Conway, T., 3456d
Cook, A. H., 3915
Cook, A. J., 1517
Cook, A. S., 2243
Cooke, G. W., 1363, 2742
Coolhaas, C., 766
Coombe, B. G., 311, 1569
Coomber, H. E., 3939g
Cooper, A. J., 699
Cooper, C. M., 2089
Cooper, W. C., 4040, 4050, 4066, 4127e
Cope, F. W., 1092, 1103, 1107, 1109, 2167
Copet, A., 1129
Coppens, N., 1948
Coppens, R., 837
Corbera V., J., 3939i
Corbett, R. E., 1954e
Cordner, H. B., 2866b
Cordoba, O. G., 1461
Corke, A. T. K., 365, 366, 445f, 3522
Corliss, C. D., 4030h
Cormack, M. W., 3995
Cornhill, W. J., 865f
Cornman, J. F., 482, 483, 487
Cornwell, P. B., 4142
Corrales Macedo, A., 709, 1834, 3844
Corrao, A., 1836
Correll, D. S., 1911
Cory, R., 3315e
Cosmo, I., 326d, 326e, 1510h, 1510i, 2558i, 3456e
Cosolo, A. G., 2605
Costa, A. S., 3841, 4076, 4077, 4127f
Costantino, G., 3119c
Costa Rica, Interamerican Institute of Agricultural Sciences, Turrialba, 4279
Coste, R., 4257
Cottier, W., 1903c
Couch, H. B., 3014
Coulson, C. B., 862
Coulter, J. K., 4183
Coupland, R. T., 3601
Courshee, R. J., 342, 1370, 1640d, 3310
Coutan, R., 3071
Coutanceau, M., 2503g
Coveney, R. D., 2928
Covington, H. M., 732k
Cowan, I. R., 4254m
Cowart, F. F., 175
Cowley, W. R., 117d
Cowperthwaite, W. G., 2053s
Cox, C. E., 2797
Cox, J. A., 731, 1605
Cox, R. S., 729, 2863, 2864p
C.P.V. Experiment Station, Indonesia, 4278
Crabtree, G., 501
Craddock, F. W., 1517
Craft, C. C., 4128j
Crafts, A. S., 2737e
Crandall, P. C., 205, 2490, 2502, 3408e
Crane, H. H., 4294a
Crane, J. C., 203, 1441, 2482, 2506, 3377
Crane, R. I., 3734, 3804
Crang, A., 326f, 390, 597, 3436, 3855i
Cranham, J. E., 3541
Crawford, D. V., 3650
Creasey, L. E., 520
di Crecchio, R., 1510j
Creech, J. L., 117i, 808, 972
Crénin, C., 1234n
Crescimanno, F. G., 1493, 3064
Cressman, A. W., 2667
Creutz, G., 2670f
Criddle, W. D., 2353, 2864v
Crider, F. J., 2079
Cripps, E. G., 1932
Cripps, G. S., 3708
Crnko, J., 692
Crocker, C., 3847
Crombie, W. M., 3736, 4184
Crooke, W. M., 718, 3287
Cropley, R., 2574
Crossan, D. F., 730, 2852, 2862
Crosse, J. E., 2670g, 3497
Crossley, J. H., 960, 3633, 3634, 3964
Crouse, R. H., 3892a
Crowder, L. V., 2701
Crowdy, S. H., 1943, 2803
Crowther, R. F., 2558o
Crummett, D. O., 4030e
Crumpacker, J. D., 2737f
Cruz, A. O., 865n
Cruz, S. R., 4208
Cruzado, H. J., 2729, 4190
C.S.I.R.O., Australia, 207, 309, 749, 1258, 1607
Cuenot, G., 2053j, 2148g
Cuillé, J., 2161, 4134, 4135
Cuisance, P., 4030i
Cullinan, F. P., 2
Cundiff, R. H., 776
Cunningham, G. H., 1640e
Curl, A. L., 3097
Curtis, O. F., 3617
Curtis, R. G., 1906
Cuscianna, N., 4127g
Cushnie, R., 2305m
Cutler, H. C., 3855j
Cutler, W. A., 3615
Cuzin, J., 773, 3870
Cyclone and Drought Insurance Board, Mauritius, 1234o
Cyprus, Agricultural Officer, 1259

Daghetta, A., 1467
Daines, R. H., 2588, 3498
Dalbro, S., 210
Dale, H. M., 1954j
Dale, J. E., 1779
Dale, W. T., 1821
Dallyn, S. L., 507, 3668, 3669
Dalmasso, G., 1484, 3456f
Damario, E. A., 1528
Dames, T. W. G., 3196
Dana, M. N., 1463
Dana, M. V., 3621
Dániel, L., 3381
Daniel, W. H., 1675b
Danielson, C. E., 3315k, 3759
Danielson, L. L., 447, 489, 505, 1666, 3651, 3679
Danvig, A. M., 3209
Darby, J. F., 1824
Darby, L. A., 3814
Darley, E. F., 25, 1043, 2092
Darlington, C. D., 4258
Darrow, G. M., 326g, 2558j, 3429
Das, B. C., 2813
Das, D. P., 2864q
Das, G. M., 1234p, 1234q, 1234r, 2293
Das, N., 1339
Das-Gupta, S. N., 3146
Datta, S. C., 3602
Daudin, J., 1079
Daulton, R. A. C., 1894
Davey, J. B., 1837i
David, D. J., 783
David, V., 3119d
David, W. A. L., 1687
Davidson, J., 2317

Davidson, J. H., 497, 3690
Davies, R. L., 1291
Davis, D., 2853
Davis, D. W., 2626
Davis, J. B., 4046
Davis, J. R., 1640f
Davis, L. H., 928
Davis, M. B., 2565, 3212, 3408f
Davis, R. R., 3991
Davis, S. H., Jr., 3041q
Davis, T. A., 3191 l, 4152, 4254n
Davis, W., 1954f
Davison, J. R., 3483
Dawson, R. F., 3872, 3895
Day, B. E., 1655, 1664
Dayton, D. F., 3327
Dayton, T. O., 2977
De, R. K., 4180
Deakin, R. T., 568
Dean, H. A., 2116, 4127h
Deb, D. B., 1903d
Debuisson, J., 4030j
Decary, R., 1954g
Decker, G. C., 594
Decker, J. P., 3308
Deeley, E. M., 2010
Deen, O. T., 3714
Deering, R. B., 19, 942
DeFrance, J. A., 484, 3625, 3628, 3629, 3630
Degman, E. S., 3374
De Hondt, H. A., 2870
Dekker, J., 624, 2865w
DeKock, P. C., 947
Delhaye, R., 445g, 1485, 1639
Delmas, H.-G., 2602, 2638
Delobbe, H., 2547
Delwiche, C. C., 1780
Demay, J., 2148h
Denise, G., 117j
Denisen, E. L., 2533
Dennison, R. A., 326k, 705, 707, 732i, 1819
Department of Agriculture for Scotland, 3234d
Dermen, H., 1395, 1396, 3335
Dermine, E., 208
Derscheid, L. A., 454, 455
Desai, B. L., 4030k
Desassis, A., 2219
Desmarais, J. G., 249
Desmarest, J., 1949
Desrosiers, R., 1119, 1120, 2173, 2187, 3129, 4146, 4254o
Desveaux, R., 857
Desvernes, P., 3041 l
Deszyck, E. J., 3055, 3094
Deullin, M., 4137
Deullin, R., 1086
Dev, S., 3894
Devcic, J., 1737
Dève, F., 2161
Devjatnin, V. A., 819
Dewey, D. H., 2494, 3797, 3989
Dewey, L. J., 3871
DeWolfe, T. A., 2094, 3075, 3083, 3085
Dey, L. M., 2948r
Dhyani, K. C., 2813
Diaz M., J., 2187, 4254o
Dick, J., 3176
Dickey, E. E., 1235k
Dickey, R. D., 1510o, 2145, 2956
Dickson, G. H., 3475
Dickson, R. C., 4127i
van Die, T., 851
Diehl, R., 2737g
Diem, M., 765
van Dijck, J. I., 2191
Dijksterhuis, H. P., 3510
Dikshit, N. N., 1424, 3049
Di Martino, E., 1020, 2106, 2107, 3119e
Dimitrova, E., 1924, 2925, 2926
Dimond, A. E., 2866k, 3020
Dingwall, A. R., 1649
van Dinther, J. B. M., 4136
Di Prima, S., 3119q
Directie van de Landbouw, The Hague, *see* The Hague
Ditman, L. P., 2797
Dittmar, H. K. F., 2192, 4148
Divekar, V. D., 802 l
Division of Horticulture, Department of Agriculture, Union of South Africa, 527
Djerassi, C., 865i
Dobroljubskij, O. K., 308
Dodds, K. S., 3237, 3329
Dodds, M. L., 1837j
Doepel, R. F., 656, 3783
Doesburg, J. J., 264, 1702
Doi, M., 2305g
Dolgih, S. T., 2790
Doll, C. C., 293
Doman, N. G., 3315 l
Domingo, C. E., 2793
Dominica Department of Agriculture and Forestry, 3234e
Dominick, C. B., 1899, 2908b
Dommergues, P., 1400
Domsch, K. H., 1760, 1971, 3012, 3948
Doolittle, S. P., 581, 2855, 2866i
Doorenbos, J., 874
Doorenbos, S. G. A., 963
Dore, J., 2825
Dorofeev, P. P., 325
Dorsman, C., 935, 2053k, 3301, 3943, 3950
van Dorst, H. J. M., 579
Dosdall, L. T., 904
Dostálek, J., 168
Dotti, F., 1494
Douglas, G., 3523, 3528
Douglas, J. S., 2311
Douglass, J. R., 619
Dow, G. F., 2558k
Dow, P., 188
Dow Chemical Co., 2732
Dowd, D., 897
Dowdle, R. F., 117i
Down, E. E., 3754
Downing, R. S., 400
Downs, R. J., 945, 1325, 3315m, 3431
Dowrick, G. J., 3329
Dowson, V. H. W., 1068h, 4127j
Dragavcev, A. P., 191, 2449
Drake, F. R., 2016
Drake, M., 714
Drew, C. G. A., 4254p
Drewes, H., 530
Drewitt, C. E., 3992
Dreyer, J. J., 3191s
Dried Fig Administrative Committee, 2503d
Dried Fig Advisory Board, 2503d
Drinkwater, W. O., 3780
Drolsom, P. N., 799, 3892k
Drosdoff, M., 1065, 2148i, 3137
Drouineau, G., 2540
Drumm, K., 31
Drummond-Gonçalves, R., 1986
D.S.I.R., London, 1833, 2492
D.S.I.R., New Zealand, 1261
D'Souza, G. I., 1234s
Dubois, L., 820
DuCharme, E. P., 2112, 2113, 2148s
Ducke, A., 865j, 1234t
Duddington, C. L., 395
Dufrenoy, J., 974j
Dufrenoy, M.-L., 974j
Duggan, J. B., 1469
Dugger, W. M., Jr., 3283, 3284
Dulac, J., 2137
Dullforce, W. M., 3803, 4292
Dullum, N., 176
Dumas, J., 1082
Dumas, P., 1077, 1623
Dumont, M., 1619
Dun, G. S., 2153
Dunham, R. S., 450
Dunn, S., 3602, 3706
Duperrex, A., 1961
Durbin, R. D., 928
Durkee, A. B., 3473
Duschin, I., 1590
Dustan, G. G., 400, 1601, 3553

Dutta, D. K., 4180
Dutta, G., 3892b
D[utta], S. K., 1234u, 1234y
Dutton, W. C., 423c
Duvekot, W. S., 4286
Dybing, C. D., 2737h
Dye, D. W., 2801, 3597i
Dymond, J. A., 3288, 3289
Džemuhadze, K. M., 3182, 3183, 3191m
Džonova, M., 1916

Eaks, I. L., 1026, 2069, 2111, 2122, 3098, 4100, 4104
Earl, J. M., 1315
East African High Commission, 3213
East African Sisal Industry, 832
East Malling Research Station, 3214
Eaton, E. L., 1510k
Eaves, C. A., 240
Ebben, M. H., 3842
Ebeling, W., 978
Edeljštein, V. I., 543
Edelman, C. H., 2312
Éder, S., 106
Edge, E. D., 235
Edgerton, L. J., 198, 2478
Edinburgh and East of Scotland College of Agriculture, 2340d
Edmond, D., 2735
Edney, K. L., 2592
Edson, S. N., 3031
Edwards, B. A. B., 2120
Edwards, C. H., 545
Edwards, G., 3062
Edwards, R. E., 3017
Edwards, R. I., 2415g
Eeuwens, B. E. P., 2312
Efford Experimental Horticulture Station (N.A.A.S.), 4294o
Egberts, H., 4010, 4011, 4012
Eggert, F. P., 3364
Ehara, K., 3910
Eheart, J. F., 2766
Ehlers, M., 667, 3712
Ehrle, L., 550
Eichholtz, F. E., 4286
Eichorn, D., 2667
Eide, C. J., 363
van Eimern, J., 2415h
Eisenberg, W. V., 1908
Elant, H., 3108, 3109, 4127k
Elgin, N., 802k
Elias, N. A., 785, 3882
Ellenwood, C. W., 117k, 3326
Elliot, J. M., 763
Ellison, J. H., 496
Elmer, H. S., 4087
Elmer, J. L., 3939h
El-Sadr, M. M., 2126
El-Sayed, M. M., 2305n
Elson, G. W., 3511
El-Tomi, A. L., 998
Elzenga, G., 823
Embleton, T. W., 1000, 2055, 2081, 3056
Emerson, B. H., 485
Emerson, H., 2671 l
Emery, G. A., 3912
Emery, W. B., 1940
Emmert, E. M., 2748, 2749, 2845
Emmert, F. H., 2503h
Emsweller, S. L., 914
van den Ende, J., 1815
Endemann, W., 1846, 1863, 1864, 1872, 1876, 1881, 3860, 3892c
Enderud, J., 2063
Endo, T., 3976
Endres, H., 1954k
Endrigkeit, A., 2773
Enercan, S., 774, 781
Eng, S., 2935
Engel, R. E., 480, 486, 3631
Engle, H. B., 1849
Engledow, F. L., 2283
English, W. H., 1565, 1566
Englund, K. L., 14
Ennis, W. B., Jr., 1661, 1675c
Enslin, P. R., 2864r
Eoff, W. H., 2885
Ephraim, A., 3096
Epps, W. M., 732a, 3740
Epstein, E., 3315n
Erickson, L. C., 1006
Erickson, R. O., 3929
Erlanson, C. O., 1290
Ermers, J. P. Z., 2414
Ernst, E., 646
d'Ersu, P., 1453
Ervin, J. O., 2076, 4095
Esau, P., 3406, 3481
Escalante, M. G., 2075
Escobar Orozco, O. M., 2271
Escritt, J. R., 3632, 3990, 3993, 3998
Esin, T., 797
Esselen, W. B., 326h
van Essen, W. J., 4254q
Estalella Ayxela, T., 1504
Esteves-de-Sousa, A., 523d
Etchells, J. L., 1837m
Eteneau, J., 3077
Ethirajan, A. S., 4204
European and Mediterranean Plant Protection Organization (EPPO), 1640g, 4273
dell'Eva, E., 2503i
Evans, C. D., 1635
Evans, H., 1203, 4206, 4210, 4211
Evans, H. J., 38, 1314, 2362
Evans, W. C., 2948e
Eve, D. J., 4054
Evers, E., 1175, 1179, 4254r
Everson, E. H., 2684
Evréinoff, V. A., 320, 1508, 2148j
Ewart, W. H., 2111
Eyster, H. C., 34

Fabian, F. W., 1772
de Fábregues y Soler, J. M., 1504
Fagen, H. J., 810
Fail, H., 1643
Fairchild, P. L. K., 2945, 2948k
Falch, J., 2558 l
Falk, K., 2864s
Fang, S. C., 57, 3855a
FAO, *see* Food
Fardy, A., 773, 3870
Farid, A. J., 3907
Farmer, A., 1421, 1468e, 2503j, 2503k
Faulkner, C., 2655
Faulkner, T. D., 4030 l
Faull, A. F., 17
Favard, P., 1982
Fawcett, C. H., 51, 1374h, 1633
Feddersen, M., 882
Feder, W. A., 3119f
Fedorjukov, M. I., 2837
Fedorova, A., 335
Fehleisen, S., 1989, 1990
Feillafé, S. M., 3167
Feldmesser, J., 3119f
Feljdman, A. L., 3819
Fellers, C. R., 326h
de Fellner, C., 1296
Fennah, R. G., 1099, 1125
Ferguson, J., 2997, 3979
Ferguson, J. D., 1545
Ferguson, W., 510, 2758, 3667
Ferguson, W. E., 249, 586
Fernández Valiela, M. V., 330
Fernando, H. E., 1170
Fernhurst Research Station, 732d
Fernqvist, I., 2429, 2458
Feron, M., 2670h
Ferraguti, A., 1557
Ferraris, I. P., 2726, 4213
Ferrell, E. K., 2697
Ferreyra H., R., 2921
Ferwerda, J. D., 2216
Feucht, W., 1432
Feuell, A. J., 2936
Fidler, J. C., 2499
Fiedler, H. J., 80
Fiedler, J., 3918
Fiji Department of Agriculture, 3234f
Filewicz, W., 348
Filipek, Z., 2948f
de Fina, A. L., 1726

Finch, C. G., 553
Fink, K., 4194
Finn-Kelcey, P., 1954h
Fireman, M., 3066
Fischer, R., 2033, 2594
Fish, M. S., 1913
Fisher, D. J., 1308
Fisher, D. V., 242
Fisher, E. G., 198, 214, 3384, 3721
Fisher, G. M., 3016
Fisher, J. E., 3788
Fisher, K. H., 1837j
Fiskel, J. G. A., 717, 2745
Fjäderhane, A. M., 117 l, 1386, 3244
Fjelddalen, J., 878, 1628
Fleckinger, J., 1400, 3352
Flegg, P. B., 2864t
Flémal, J., 1219
Fleming, H. K., 310
Fleming, R. W., 3892d
Fleming, W. E., 3041r
Flemion, F., 417, 943, 3338
Fleschner, C. A., 2066
Fletchall, O. H., 459
Fletcher, W. A., 1068i, 2148k, 4062
Fletcher, W. W., 3684
Flik, H. M., 404
Flocker, W. J., 3290
Flood, A. E., 3501
Floor, J., 153, 933
Flores C., D., 976
Florida Agricultural Experiment Stations, 2325
Floyd, F. J., 4222
de Fluiter, H. J., 620, 2580, 2769
Focan, A., 2305o
Fogle, H. W., 2503 l, 3362
Fogliani, G., 1510a, 1570
Folley, R. R. W., 3396
Fonsart, P., 1068j
Fontaine, T. D., 1939
Fontana, P., 1571, 2661
Food and Agriculture Organization (FAO) 1262, 1263, 1285d, e, 4274
Foote, F. J., 3119a
Foott, J. H., 2616
Ford, E., 2415i
Ford, H. W., 2080
Ford, J. H., 2671 l
Forest, B., 3786
Forestry Commission, London, 1640h
Forney, F., 2487
Fors, A. L., 2254
Forsberg, J. L., 2006
Forshey, C. G., 305
Forsyth, A. A., 3197
Forti, G., 1467
Fortini, S., 35, 1867
Foschi, S., 2596, 2628, 2670i, 2670j
Fosler, G. M., 1359
Fossum, M. T., 1957, 1958
Foster, H. H., 1635, 3539
Foster, L. J., 1064
Foster, R., 1234v
Foucart, G., 2939
Foulds, R. M., 2593, 3515
Fowler, R. L., 3129
Fowler, T. E., 3326
Fox, C. J. S., 629
Foytik, J., 732e
Francis, F. J., 253
Franco, C. M., 2207
Frank, H., 4020
Frankenburg, W. G., 1877, 1878
Franklin, M. J., 4260
Frankton, C., 2672
Franquin, P., 830
Franssen, C. J. H., 1763
Fraselle, J. V., 1149
Fraser, D., 2908h
Fraser, W. S., 3761
Frazier, N. W., 3597j
Fredericksen, C. F., 1700
Freed, V. H., 57
Freeland, R. O., 40
Freeman, G. H., 2401, 2402
Freeman, J. A., 2737i, 3600, 3693e
Freeman, T. E., 659
Fregola, C., 2558m
Freiberg, S. R., 4138
Frémond, Y., 2198
French, B. C., 2503m
Frenyó, V., 2878
Frère, J., 1234w
Freshwater, I. T., 462
Freytag, G. F., 600
Freytag, H. E., 3408c
Frey-Wyssling, A., 969
Frick, K. E., 1598
Fridlund, P. R., 1541
Friedrich, G., 443, 1418
Friend, W. G., 117m
Fries, N., 1305
Friesdorf / Bad Godesberg, Gärtnerische Versuchsanstalt, 870, 895, 4275
Friesen, G., 3685
Friesen, H. A., 451
Frisbie, L. F., 971
Friško, K. N., 2391
Frith, H. J., 2091
Fritzsche, J., 3892e
Fritzsche, R., 3408g
Fröhlich, G., 3731
Fröhlich, H., 578
Frohner, W., 3380
Frost, K. R., 3315o
Fruit and Vegetable Canning and Quick Freezing Research Association, 1285f
Fry, P. R., 4004
Fuchs, F. J., Sr., 3190
Fuchs, W. H., 430
Fujieda, K., 574
Fujii, F., 32
Fujii, T., 2537
Fujita, K., 991, 1032, 1062
Fukaki, S., 42
Fukuda, J., 1015, 1018, 1022, 1063
Fukushima, Y., 1728
Fuller, W. H., 3290, 4047
Fulton, J. P., 2581, 2671m
Fulton, R. E., Jr., 1068u
Fulton, R. H., 3597k
Fults, J. L., 2737h
Funamoto, H., 577
Furmidge, C. G. L., 445h, 445i, 3585
Furr, J. R., 1005, 1040, 4051
Furuta, T., 955, 3965
Furuya, M., 3662
Fuss, F., 22
Futh, G., 3343

Gaarder, P., 3041s, 4030m
Gaastra, P., 2415j
Gac, A., 1503
Gagne, J.-B., 2864u
Gagnieu, A., 1468f
Galanti, M., 850
Gallagher, J. E., 485, 3693f
Gallay, R., 2327
Gallegly, M. E., 1712
Galston, A. W., 61
Gambrill, R. G., 2621
Gammon, E. T., 913
Gandhi, S. R., 2305p
Gandy, D. G., 1769
Gangstad, E. O., 1928
Gansa, A. N., 1311
Gantt, C. W., Jr., 3315p
Garavel, L., 2564
Garbosky, A. J., 1726
García Barceló, J., 1504
García Guillinta, M. J., 3933
Gardiner, B. O. C., 1687
Gardner, R., 1479
Gareev, E. Z., 1434
Garg, O. K., 3852
Garmany, H. F. M., 757, 1859
Garner, R. J., 151, 152, 2508
Garoche, P., 1029
Garrett, S. D., 2313
Garthwaite, J. M., 3802, 3944
Garton, J. E., 2353, 2864v
Gasiorkiewicz, E. C., 3961
Gaskins, M. H., 3031
Gasser, R., 2670k
Gaston, H. P., 1454, 3395, 3408h
Gates, C. T., 703, 704, 4043
Gauch, H. G., 3283, 3284

Gaümann, E., 1820, 2854
Gaur, B. K., 2383
Gautheret, R. J., 1374i
Gavrilović, M., 143
Gayford, G. W., 326i
Gazzo, J., 3939i
Geard, I. D., 386
Geisenheim am Rhein, Bundesanstalt für Qualitätsforschung, 4294c
Geisenheim am Rhein, Lehr- u. Forschungsanstalt Wein-, Obst- u. Gartenbau, 4276
Geissler, T., 689, 2832, 3201, 3705
Geissman, T. A., 1546
Gellatley, J. G., 1762, 3087
Genkelj, P. A., 3249
Gentry, H. S., 807
Georgala, M. B., 398
Georghiou, G. P., 2104
Geraldson, C. M., 2842
Gerber, B., 1612
Gerber, H., 336
Gerhardt, F., 3404
Gerlach, W., 4030n
Germain, R., 2305q
Germek, E., 4016
Germing, G. H., 2406
Gerritsen, J. D., 1477, 2503n
Gerstner, W., 1954i
Getty, M. R., 4096
Ghafoor, A., 4030o, 4132
Ghani, M. A., 4091
Ghayur, A., 528, 2864w
Ghisleni, P. L., 3980
Giacomelli, C., 2409
Giang, P. A., 3593, 3596
Gibbs, M., 1315, 1374j
Gigiberija, Š. S., 4237
Gilbert, J. C., 732f, 3707
Gilbert, F. A., 2691
Gilden, R. O., 3316m
Gill, D., 915
Gill, D. L., 917
Gillard, A., 1998
Gillespie, H. L., 2060, 4127 l
Gillot, J., 2948g
Gilmer, R. M., 380
Ginai, M. A., 119, 3358
Giovannozzi, M., 2907, 3869
Giovannozzi-Sermanni, G., 1866, 3876
Giraldi, G., 3598i
Giraud, E., 3892f
Gireau, R., 1599
Giri, K. V., 29, 1954u
Glas, A., 2488
Glaser, W., 953
Glass, E. H., 2630
Glasscock, H. H., 565, 3962
Glauco, R., 2622, 2670 l
Glavinic, R., 732g
Gleason, L. S., 2737j
Glendening, B. L., 94
Glenn, R., 3939j
Glover, J., 1300
Glover, P. M., 1234x, 1234y, 3184
Glover, W. C., 118a
Gloyne, R. W., 23
Gmür, V., 3486
Go, L. S., 818
Godan, D., 1992
Godefroy, B., 1234z
Godley, E. J., 956
Goetsch, W., 1830, 1837k
Goguadze, V. P., 1067
Goheen, A. C., 1578, 1579, 1640i, 3589
Goidànich, G., 2099, 2948h
Goĭko, V. A., 534
Gokhale, N. G., 1225
Gold, A. H., 3191n
Gold Coast Department of Agriculture, 3215
Gold Coast, University College, 1072
Golding, E. W., 117n
Goldschmidt-Blumental, S., 4039
Golikov, V. G., 3702
Gómez Zuluaga, M., 3934
González B., J., 628
Gonzalez Kepfer, B. R., 651
Gonzalez M., R., 4173
Gonzalez Melo, J., 2148 l
Good, H. M., 1954j
Good, J. M., Jr., 2018
Good, N. E., 60, 1374a
Good, R., 4259
Goodall, D. W., 681, 1105
Goodall, G. E., 1000, 4045, 4127m
Goode, J. E., 2452, 2453
Goodey, J. B., 2812, 4260
Goodey, T., 4260
Goodman, O., 1782, 3732
Goodman, R. N., 1554, 2587
Goodspeed, T. H., 1239
Goodwin, T. W., 2380
Goold-Adams, D., 3198
Goor, A., 3322
Goormans, C., 2303
Goos, U., 3568
Gopalakrishnan, P. K., 3926
Gopinath, D. M., 2908c
Gordon, M., 112
Gorenflot, —., 2040
Gorin, T. I., 221, 3386
Gorinova, Ju. V., 3508
Gorjunov, N. S., 326j
Gorter, C. J., 260g
Goss, J. A., 3799
Gossard, A. C., 2670e
Gottscho, A. M., 1877
Götz, B., 445j
Gough, H. C., 633
Gough, W. H., 1935
Gould, C. J., 915, 3983, 4030p
Gould, H. J., 631
Goulden, C. H., 1374k
Gouny, P., 1349
Gourlay, E. S., 1903c
Govaert, F., 843
Govi, G., 2596
Gowans, K. D., 3838
Gowder, R. B., 3456h
Gowing, D. P., 2226, 4189
v. d. Graaf, A. J., 3638
Graham, K. M., 1706
Graham, T. W., 2901
Grainger, M. M., 3549
Grandori, R., 2623, 2636, 2864x
Granhall, I., 260h, 2421
Graniti, A., 4127n
Grant, T. J., 4076, 4077
Grasselly, C., 2433
Grassmann, W., 1954k
s'Gravenhage, *see* The Hague
Graves, A. H., 2555
Graves, C. H., Jr., 2670m
Gray, H., 3041t
Gray, H. E., 2314
Gray, R. A., 47, 2755
Grebinskiĭ, S. O., 2391
Greene, P. H., 986
Greenidge, K. N. H., 1374 l
Greensill, T. M., 1681
Greenwood, C. T., 2864a
Gregory, F. G., 193
Grellier, P., 3303
Grente, J., 1505, 1524, 1577
Grierson, W., 1031, 1033, 3100, 4128a
ap Griffith, G., 2415k
Griffiths, F. P., 4127u
Griggs, W. H., 353, 2670n
Grigsby, B. H., 479, 2715, 2718, 2737k, 2737 l, 3615, 3659, 3677
Grill, F., 3452
Grimaldi, J., 1235a, 1235b
Grindley, D. N., 854
Grišina, G. S., 2369
Grob, R. L., 2415 l
Grobbelaar, N., 610
Grogan, R. G., 3807
Grolleau, J., 3425, 3776
de Groote, R., 2959
Grooten, R., 2558n
Gros, D., 2198
Grosso, J. J., 1890
Groszmann, H. M., 117o
Groves, J. R., 2646
Grümmer, G., 3199
Grunberg, A., 3086
Grundon, M. F., 1914
Gruppe, W., 1519
Grütz, W., 3277
Gude, C. J., 3135

Guengerich, H. W., 1540, 2576
Guennelon, G., 2670h
Guest, R. T., 490
Guilbeau, W. F., 1208, 2253, 2306p
Guillaumin, A., 4030q, 4030r
Guillemat, J., 849
Guillermo, R. J., 1204, 4220
Guilliams, C., 2598
Guinard, A., 1222, 1223
Gumpenstein—*see also* Admont—Bundesversuchsanstalt für Alpenländische Landwirtschaft, 3696
Gunkel, W. W., 523h, 1369
Gunnell, F. H., 3559
Günthart, E., 1591
Gunther, F. A., 2110
Gupta, D. K., 3939k
Gupta, S. K. S., 3191j
Gurgenidze, M. G., 3336
Gurov, M., 649
Gusev, M. I., 2743
Guseva, E. I., 3119g
Gustafson, F. G., 117p, 2359
Gutierrez, M. E., 3889, 3892g, 3892h, 3892i
Gutter, Y., 4101
Guttridge, C. G., 277, 3430
Guyer, G. E., 2798
Guyot, H., 4134, 4135
Guyot, L., 849
Guzman, V. L., 1660, 1665, 2708, 2716, 2719, 2727, 3671, 3672
Gyrisco, G. G., 2665
Gyss, P., 1187

Haag, H. P., 3138
Haage, W., 974k
de Haan, I., 2501
van Haarlem, J. R., 2460, 2558o
Haas, A. R. C., 1001, 2056, 2058, 2059, 2088, 4033, 4049, 4112
de Haas, P. G., 156, 260j
Habran, R., 2521
Hack, H. R. B., 3315q
Hack, J., 3856v
Hacskaylo, E., 3307
Haertl, E. J., 2360
Hafen, L., 3815
Hafiz, A., 4060, 4132
Häfliger, E., 445k
Hagan, R. M., 85
Hagedorn, D. J., 2799, 3752, 3757
Hagihara, H. H., 2260
The Hague, Directie van de Landbouw, 1260, 2324
Hahn, E., 3041u
Hahn, P., 732h
Hähne, H., 516
Haine, K. E., 556
Haines, R. G., 2864y
Haines, W. B., 4181
Hainsworth, E., 3505
Hakim, M. A., 3928
Halais, P., 3166
Halazon, G., 3572
Halevy, A., 4063, 4064
Halkias, N. A., 2352
Hall, A., 947
Hall, A. D., 2355
Hall, B. J., 1725, 1802, 3850
Hall, C. B., 707, 732i, 1819
Hall, E. G., 1458, 1502, 2966
Hall, J. C., 2066
Hall, R. D., 1934
Hall, R. M., 4254s
Hall, S. A., 3593
Hall, W. A., 2357
Hall, W. C., 1198, 3827
Haller, M. H., 3518
Hallock, H. C., 3714
Halma, F. F., 2148y
Halsey, D. D., 1045, 2571
Halsey, L. H., 2858
Hamid, A., 2503o
Hamilton, C. C., 3041q
Hamilton, J. M., 3521
Hamilton, M. G., 1835, 2859
Hamilton, R. A., 4127o
Hamlyn, B. M. G., 732j
Hammar, H. E., 3590
Hammer, O. H., 445 l
Hammond, L. C., 4061
Hammond, P. S., 2169
Hamner, C. L., 1667
Hamner, K. C., 733b
Hampson, C. P., 3599
Hanada, S., 3408n
Hanchey, R. H., 954, 3971
Hancock, C. R., 193, 2448
Hancox, N. C., 2944
Hand, M. E., 3019
Handley, G. J., 1906
Handte, —., 3584
Hanger, F. E. W., 944
Hanna, A. D., 2190
Hanna, W. J., 2415m
Hannah, L. H., 491
Hannibal, L. S., 2053 l
Hannigan, M. A., 1446
Hannon, C. I., 684
Hansch, C., 1374p
Hansen, B., 1386
Hansen, C. J., 315, 316, 2483, 3340, 3372, 3373
Hansen, E., 3405, 4009
Hansen, H., 2305r
Hanson, J. B., 3688
Hanson, N. S., 1659
Hanson, W. D., 3239
Hanzel, R. J., 887
Haque, H., 2103
Harada, R., 3118
Haramaki, C., 938
Harcourt, D. G., 1714
Hardenburg, R. E., 1776
Hardie, M., 656
Harding, P. L., 3046
Harding, R. B., 990, 3066, 3119h, 4065
Hardisty, S. E., 352
Hardy, F., 4254t
Haritonov, V. N., 456
Harler, C. R., 4254u
Harmer, P. M., 2864z
Harmon, F. N., 2584
Harney, P. M., 253
Harpaz, I., 1055
Harper, C. W., 375, 3502
Harper, R. S., 1468g
Harries, F. H., 1736, 1738, 3747
Harris, G. H., 544, 3433, 3829
Harris, H. C., 1857
Harris, H. J., 437
Harris, J. B., 120
Harris, J. H., 732k, 2053m, 3041v
Harris, R. G., 1468h
Harris, R. V., 354
Harris, R. W., 353, 2483, 2670n, 3372, 3373
Harris, W. B., 3361
Harris, W. H., 2121
Harrison, B. D., 3879
Harrison, C. M., 2017
Harrison, D. E., 2817
Harrison, T. B., 2569, 3472, 4285
Harrold, L. L., 3434
Hart, S. W., 484, 3628, 3629, 3630
Hartley, C. W. S., 1157
Hartley, G. S., 114
Hartmann, H. T., 2141, 3112, 3340, 3341
Hartt, C. E., 2266
Harvey, J. M., 3533
Harvey, W. A., 523b
Harward, M. E., 3806
Hashimoto, S., 3085
Hashimoto, Y., 1954 l
Haskell, G., 188
Haslam, J., 764
Haslam, R. J., 3857
Hassenkamp, R., 908, 3977
Hassid, W. Z., 1744
Hassis, F. A., 2053m
Hastings de Gutiérrez, L., 1148
Hatcher, E. S. J., 152, 2508
Hathway, D. E., 3939 l
Hatipov, A. E., 3487
Hatipov, Š. E., 3487
Hatt, H. H., 2944, 2948i
Hatta, S., 592
Hattingen, R., 2004

Hatton, T. T., 200, 260i
Hattori, S., 780
Hauck, F. W., 2267
Haupt, W., 1328
Hauser, E. W., 2683, 2701
Hauser, J., 2899
Hauszer, K. T., 2013
Haviland, E. E., 970
Haviland, W. E., 3892j
Havis, L., 174
Havord, G., 1107, 1108, 1109, 1111
Hawaiian Sugar Planters' Association, 1658, 2246, 2270, 2274, 2277, 2282
Hawley, W. O., 117i, 2990
Hawthorn, L. R., 2737m
Hay, J. R., 56, 3266, 3686
Hayase, H., 1724
Hayashi, S., 1532, 3490
Hayes, S. F., 1969
Hayot, H., 3647
Hayward, H. E., 82
Heath, O. V. S., 3268
Heath, R. G., 1271
Heatherington, W., 2190
Hebblethwaite, P., 521
Heddergott, H., 2818
Hedges, T. R., 3750
Heemstra, J., 1837 l
Heggestad, H. E., 742, 1890, 3878
Hegnauer, R., 818
Heiber, H., 3408j
Heimann, M., 4030s
Heinemann, P., 2865a
Heinisch, K. F., 4254v
Heinze, K., 974 l
Heller Cohen, O., 3297
Hellmers, E., 890
Hellqvist, H., 2771
Hellyer, A. G. L., 2340e, 2340f, 2340g, 3216, 4277, 4294a
Helmkamp, G. K., 4095
Helms, K., 1885, 1886
Helson, V. A., 3693g
Helton, A. W., 445m, 1564
Hely, P. C., 1021, 1827
Hemingway, R. G., 2415n
Hemming, H. G., 609
Hemphill, D. D., 471, 2694, 3618
Hendershott, C. H., 185
Henderson, J. H. M., 117q
Hendrickson, A. H., 314, 1448, 2352, 2616
Hendrickson, R., 1919
Hendriks, J. A. H., 1235c
Hennebo, D., 2957
Henriet, J., 1675d
Henriksen, A., 2523
Hentschel, G., 3041w
Hepburn, G. A., 2784
Hering, M., 2637
Herklots, G. A. C., 2149
Hernandez, E., 3462
Herrero, J., 2446
Herrick, E. H., 3572
Herron, J. W., 3622, 3663
Hervey, G. E. R., 2768
Hess, C. E., 73, 74
Hesse, C. O., 146, 147
Heuberger, J. W., 364, 2671v, 2865o, 3500
van Heusden, W. C., 2228
Hewetson, F. N., 1445
Hewitt, C. W., 732 l
Hewitt, E. J., 2363, 3721, 3722
Hewitt, W. B., 2670o, 2670p
Heydecker, W., 2741, 3650, 4292
Heymann-Herschberg, L., 4042, 4055
Heyns, A. J., 3597 l
HG., 3970
Hida, B., 999
Hidding, A. P., 21
Hield, H. Z., 2093, 3075
van Hiele, T., 248, 2493, 4286
Higdon, R. J., 218
Highkin, H. R., 608, 1740, 3755
Highland, H. A., 970, 4030t
Hilborn, M. T., 2512, 3525
Hildreth, A. C., 3571
Hilgeman, R. H., 3451, 4047
Hilkenbäumer, F., 2503p, 3357, 3408i, 3408j
Hill, C. H., 2645, 3561
Hill, R., 2315
Hill, R. G., 2551
Hill, R. G., Jr., 332, 2511, 3456g
Hill-Cottingham, D. G., 1307
Hillenius, C., 4286
Hilliar, F. T., 4030u
Hillman, W. S., 701, 2865b
Hills, O. A., 732m
Hills, W. A., 1838d
Hilton, R. J., 2844
Hilton, R. W., 3159
Hines, C., 2558p
Hinman, F. G., 2806
Hintze, S., 206, 1404, 3772
Hiraiwa, K., 2049
Hiroyasu, T., 2666
Hirst, J., 2948c
Hirst, J. M., 372
Hitchcock, A. E., 59, 117r, 2347, 3272
Hitchcock, S., 422, 1613, 2651
Hitier, H., 750, 3881
Hitz, C. W., 282
Hlaváčková, Z., 2917
Ho, T., 3748
Hoare, E. R., 438, 1355, 2415g, 2415o, 2847
Hobbis, E. W., 2456, 3411
Hoblyn, T. N., 2573
Hochstein, F. A., 1907
Hockey, J. F., 1634
Hockey, K. C., 691
Hodge, W. H., 863, 1290, 3235, 3855k, 3936
Hodgson, G. L., 3756
Hoffman, J. C., 3855 l
Hoffman, M. B., 198
Hofmeyer, J. D. J., 2097
Hofvander, B., 260k
Hogg, W. H., 2344
Höjby, H., 2865c
Holdaway, F. G., 2130
Holdeman, Q. L., 2898, 2908d
Holdsworth, L. W., 3597m
Holdsworth, M., 2367
Holland, A. H., 3850
Holland, D. A., 2400
Holley, R. W., 333
Holley, W. D., 1973, 1977
Holliday, P. C., 1121
Hollings, M., 974m, 1970
Holly, K., 2737n, 2938
Holly, M. A., 1240
Holm, L. G., 2691, 2737u, 3640, 3757
Holmberg, D. M., 2795
Holmes, E., 2670q
Holmes, F. O., 1887
Holmes, R. S., 1348
Holz, W., 2734
Homann, W. F., 1903e, 2908n
Homès, M. V., 88, 97
Hong Kong, Director of Agriculture, 4294f
Honma, S., 602
van Hoof, H. A., 2829, 3855m
Hoover, M. M., 3839
Hoover, M. W., 326k, 2785
Hope, A. B., 1333
Hope, G. W., 614
Hopkins, C. Y., 3041n
Hopkins, E. F., 4103
Hopkins, L., 3856g
Hopp, H., 3129
Hopp, R., 263
van Horn, D. L., 3924
Horn, N. L., 731
Horne, F. R., 3694
Horning, E. C., 1913
Hornstein, I., 640
Horovitz, S., 1235d
Horsfall, F., Jr., 1620, 2670r, 3570
Horth, C. J., 220
Horticultural Education Association, 2326, 4294g
Hoskins-Davies, R. G., 1903f
Hotz, E., 140
Hough, L., 1525
Hough, L. F., 3419
Hough, W. S., 2629, 2645, 3561

Housley, S., 3315g, 3315r
Hovadík, A., 3701
Howard, G. A., 1933, 1954m, 2948j, 3913, 3915
Howard, H. H., 616
Howe, R. W., 2415p
Howell, J. T., 499
Howitt, A. J., 415
Howland, A. F., 1596, 1799, 3542
Hoyle, B. J., 3793, 3794
Hoyle, D. A., 194
Hoyos Bueno, M. J., 1938
Hoyt, S. C., 2631
Hrishi, N. J., 2908c
Hruschka, H. W., 1784
Hu, C.-C., 3119i
Huang, H. T., 1510 l
Hubbard, R. A., 117s
Hubbeling, N., 620, 3855n
Huckenpahler, B. J., 3035
Huckins, R. K., 460
Hudelson, R. R., 1264
Hudgins, H. N., 1346
Hudson, C. E., 1
Hudson, J. P., 72, 76, 719, 1475, 1816, 2415q, 2520, 3315s, 4292
Huet, R., 3155
Huffaker, C. B., 2670s, 3597n
Huffman, J. W., 1568
Hughes, C. G., 2273, 4255z
Hughes, J. T., 3744, 3745
Huglin, P., 326 l, 1492
Hugues, M., 326e
Huisman, H. O., 445n
Hulburt, W. C., 3315p
Hulme, A. C., 1088, 1444, 3402
Humbert, R. P., 2261, 2262, 2305s
Hume, P. F., 4236
Humphrey, N., 1295
Humphries, E. C., 1884
Hunada, T., 769
Hunnam, D., 2593, 3515
Hunter, A. H., 93
Hunter, A. W. S., 2422, 2472
Hunter, J. A., 2027, 4004
Hunter, N. W., 3315t
Hussain, G., 3907
Hussain, I., 3339
Hussein, A. El A., 3855w
Hussong, R. V., 810
Hutcheson, T. B., Jr., 1854
Hutchinson, P. B., 2305t, 4226, 4232
Hutter, W., 748
Hutton, K. E., 376
Huyke, A. S., 3192d
Hveem, H., 3408k
Hyche, L. L., 2652
Hyder, D. N., 468
Hyland, F., 3525
Iacopini, P., 3717
Ibbett, W. C., 732n, 2344
Icha, F., 3716
Ichishima, K., 759
IFAC *see* Institut
Ignatjeva, I. P., 4030v
Iijima, T., 3260
Iikubo, S., 1061, 1063
Ilangakoon, M. L. C., 2305u
Ilieva, S., 2925, 2926
Iljin, G. S., 3873, 3874
Iljin, W. S., 1351
Iljinskiĭ, A. A., 3435
Illinois Agricultural Experiment Station, 1264
Imamura, S.-I., 1985
Imperial College of Tropical Agriculture, Trinidad, 1091, 4294h
Inaba, T., 4235
Inciong, R. A., 4208
Indian Coffee Board, 2204
Indian Council of Agricultural Research, 2247
Indian Tea Association, Tocklai, 2284, 2286, 2288, 2289
Indonesia, C.P.V. Experiment Station, 4278
I.N.É.A.C. (Institut National pour l'Étude Agronomique du Congo Belge), 1265
Ingersent, K. A., 4292
Ingerson, H. G., 1371
Ingram, J., 3457
Ink, D. P., 3420
Innes, R. F., 2263
Inoue, Y., 606, 2788
Institut des Fruits et Agrumes Coloniaux (IFAC), 258, 3217, 3234g
Institut National de la Recherche Agronomique (INRA), 285, 841, 1266, 3234h
Institut des Recherches sur le Caoutchouc en Indochine (I.R.C.I.), 1174
Institut fur Tabakforschung, Dresden [previously Wohlsdorf-Biendorf], 2337
Institute of Brewing Hops Advisory Committee, 835
Institute of Horticultural Engineering, Wageningen, 1360
Instituut voor Toegepast Biologisch Onderzoek in de Natuur, Arnhem, 1285g
Inter-American Institute of Agricultural Sciences, Turrialba, Costa Rica, 4279
International Labour Organization, 1069
International Seed Testing Association, 1682
Iowa, Division of Agriculture, State College, 1267
Iowa State College, 2678
Ireland, Department of Agriculture, 1285h, 3234i
Irvine, F. R., 3855o
Isaac, I., 2978
Isenberg, F. M., 3782
Isenberg, I. H., 3939m
Isherwood, F. A., 1703
Ishihara, M., 3118
Ishii, M., 4127p
Isozaki, Y., 540
Israel Export Journal, 4035
Itakura, K., 992
Itakura, T., 3067
Ito, S., 1068n, 4126
Ivančenko, A. V., 3592
Ivanoff, D., 1921, 1925, 1954n, 1954o
Ivanoff, T., 1954o
Ivanov, S., 1946
Ivanova, E. B., 2546
Ivčenko, S. I., 122
Ivens, G. W., 2737o
Ives, J. V., 2595
Iwasaki, T., 993, 999
Iyenger, B. T. R., 3939k
Izard, C., 750, 3881

J., R. M., 2948k
Jackaja, G., 3565
Jacks, G. V., 3200
Jacks, H., 405, 445o, 732o, 732p, 1696, 1697, 1721, 2027, 3595, 3597o, 3963
Jackson, P., 865k
Jackson, R. K., 117e
Jackson, T. H., 1070, 1164
Jackson, W. T., 1818
Jacob, F. C., 2856
Jacob, K. C., 1134, 2305v
Jacoboni, N., 4115, 4121
Jacobs, W. P., 49, 65
Jacobson, H. G. M., 3013
Jaenichen, H., 923
Jager, H., 732q
Jagschitz, J. A., 482, 483, 487
Jain, N. L., 3124
Jaivenois, A., 2597
Jakobs, H., 4176
Jakovuk, A. S., 2908e
Jamaica Department of Agriculture, 1268, 1285i, 4280, 4294i
James, C., 3895
James, E. B., 3992
James, E. H., 4261
James, W. O., 1329
Jammar, ., M1129

Jan, O., 1207, 2305w
Janes, B. E., 542, 2740, 3780
Jang, R., 2127, 2558x
Janíček, G., 2392, 2826
Janick, J., 687
Janicki, J., 3790
Jank, H., 2987
Jannaccone, A., 2929
Jary, C. L., 1930
Jary, S. G., 3729
Jasmin, J. J., 510, 2758, 3658, 3667
Jauch, C., 743
Jaworski, E. G., 57
Jayanetti, E., 3862
Jazvickiĭ, M. N., 2459
Jefferson, R. N., 4005
Jeffrey, I. M., 2932
Jeffrey, R. N., 778, 2885
Jenkins, J. E. E., 357, 1974
Jenkins, J. M., Jr., 3735
Jenkinson, J. G., 564
Jennings, R. F., 4065
Jenny, J., 1640j
Jensen, D. D., 2670t
Jensen, E. R., 587
Jensen, H. J., 918
Jensen, J., 117b
Jensen, W. A., 1317, 2374
Jeppson, L. R., 2109, 2110, 2111, 4087
Jerrim, D. M., 3315c
Jesser, M. J., 2109
Jeszenszky, Á., 3315u
Jiménez, F. A., 812
Jiránek, J., 643
Joachim, A. W. R., 1257
Johansen, C., 2471
Johansson, E., 132, 134, 139, 211, 2427, 2503q, 2591, 3410
John, C. A., 1823
John, C. M., 1133, 3131
John, M. E., 639, 2812
John Innes Horticultural Institution, 4281
Johnsen, P., 1627
Johnson, A. G., 968, 3715
Johnson, B. L., 523b, 974n
Johnson, C. E., 2736
Johnson, C. M., 2416d
Johnson, G. A., 445e
Johnson, G. V., 4006
Johnson, J. F., 2558h
Johnson, K. E. E., 1719
Johnson, N. M., 1913
Johnson, R. B., 3088, 3091
Johnson, S. P., 3827
Johnson, W. A., 539
Johnson, W. L., 3810
Johnston, C. J. R., 3090
Johnston, F. B., 3315v
Johnston, J. J., 1068k
Johnston, R. E., 1473
Johnston, S., 2510, 3456k
Johnstone, F. E., Jr., 974o
Johnstone, G. H., 2053n
Johnstone, K. H., 903, 2053o
Johri, B. M., 2053p, 4127q
Joley, L. E., 2571, 3331
Jolly, A. L., 2167, 2177, 3191o, 4140
Joly, S., 4013
Jones, A. H., 249, 586, 690
Jones, D. K., 1259
Jones, E. W., 619
Jones, G. E., 1797
Jones, H. A., 3774
Jones, I. D., 1837m
Jones, J. K., 46
Jones, J. L., 1952
Jones, J. P., 2843
Jones, L. S., 1547
Jones, L. T., 1499
Jones, P. A., 2205
Jones, R. L., 116
Jones, R. W., 260 l
Jones, S. C., 1604
Jones, T. H., 2568
Jones, W., 1993
Jones, W. W., 1000, 2055, 2081, 2082, 3056, 3463
de Jong, D. J., 2670u
de Jonge, C., 3520
de Jonge, P., 1234f
Jordan, C., 3427
Jordan Ministry of Agriculture, 1269, 3218
Jordović, M., 3597p
Jorgensen, C. J. C., 225
Jørgensen, J., 657
Joshi, B. S., 1727
Joslyn, M. A., 3408 l
Joubert, T. G. la G., 2864r, 2865d, 3778
Jovićević, B., 3597q
Joyner, J. F., 1928
Judenko, E., 2190
Julien, J. H., 3164
Junges, W., 45, 646, 671, 3922, 3975
Juska, F. V., 2017

Kaan, J., 2553
Kaczmarek, T., 1920
Kaden, O. F., 2305x, 3130
Kahl, E., 444
Kahl, W. H., 3905
Kahn, A., 3799
Kaindl, K., 3380
Kainski, J., 3766
Kajiura, M., 424
Kalantyrj, M. S., 3917
Kalin, E. W., 3985
Kaljtja, A. Ja., 2865e
Kallauch, —., 974p
Kalmár, Z., 319
Kameneva, G. S., 2459
Kamihama, T., 589
Kamiya, S., 1837q, 3191q
Kammeyer, H. F., 974q
Kamp, J. R., 1359
Kanagaratnam, N., 2298
Kanapaux, M. S., 3855 l
Kandaswami, M., 792
Kandiah, S., 1112, 1153, 3862
Kanekal, G. S., 1773
Kantzes, J. G., 2797
Kanwisher, J. W., 326p
Kaplow, W., 3187
Kar, K., 1214
Karimullah, —., 3408w, 3928
Karlin, E. J., 4006
Karnatz, H., 158, 1652, 3477, 3478
Karner, L., 524, 3696
Káš, V., 312
Kasahara, J., 2475, 3367
Kasjjanenko, A. I., 2445
Kassanis, B., 1884
Kaszonyi, S., 1559
Katakura, K., 1054
Katayama, T., 1954p
Kato, J., 3269
Kato, K., 279
Kato, Y., 2387
Katsumata, H., 645
van Katwijk, W., 964, 3491
Katyal, S. L., 3191p, 4254w
Kaudy, J. C., 1007
Kaufman, C. J., 865x
Kaufman, J., 1784
Kaura, N. R., 155 '
Kavraĭskiĭ, Ju. V., 2466
Kawaguchi, T., 975m
Keane, F. W. L., 3334
Kearns, H. G. H., 374, 399, 1074, 3503, 3540, 3586, 3597r, 3597s
Kedrin, S. P., 260m
Keegel, E. L., 1227, 4248, 4254x
Keen, R. A., 4030w
Keener, P. D., 3855p
Kefford, N. P., 4057
Kefford, R. O., 1837n
Keijer, E. J., 3510
de Keijzer, R., 525, 4282
Keiner, W., 1690
Kelbert, D. G. A., 1837o
Keller, J. R., 2050
Keller, K. R., 1931
Kelley, V. W., 3369, 3370, 3371
Kelman, A., 1896
Kelsey, D., 3939n
Kelsheimer, E. G., 3003
Kemmer, E., 1438
Kemp, R. W., 2508
Kemp, W. S., 204
Kendall, W. A., 1334
Kendrick, J. B., Jr., 25, 2092, 2865f, 3248

Kennard, W. C., 864, 1154, 2214, 2934, 3145, 3935, 4086, 4178
Kennedy, D. R., 2914
Kennett, C. E., 2670s
Kenney, J. E., 1387
Kent, M. J., 66
Kenten, R. H., 1343, 2371
Kenworthy, A. L., 1520, 3470
Kenya Department of Agriculture, 1285j, 3219, 4283
van der Kerk, G. J. M., 52
Kern, H., 1820
Kerr, A., 2752
Kerr, E. A., 2865g, 3475
Kerr, S. H., 3997
Kerr, W. E., 791
Kers, D., Hzn., 3360
Kesler, W., 2305q
Kester, D. E., 146, 147, 315, 3465
Kesterson, J. W., 1919
Kettner, H., 3324
Khan, A., 3799
Khan, A. H., 2601, 2912, 3907
Khan, A. J., 1155
Khan, A. M., 4225
Khan, A. R., 528, 3939o
Khan, A. W., 3698, 3855q
Khan, J. A., 3089
Khan, J. K., 4090
Khan, K. A. W., 162
Khan, K. F., 1905, 3456h, 3926
Khan, M. A., 1198
Khan, M.-u.-D., 3339
Khan, M. S., 2103
Khan, O. R., 3456i
Khanna, A. N., 673
Khanna, K. L., 1206, 2255, 4203
Khanolkar, V. R., 802 l
Kho, Y. O., 3792
Khoshoo, T. N., 1837p
Khot, B. D., 1773
Kibushi, H., 4244
Kičigin, A. A., 24
Kidd, D. A. A., 865 l
Kido, H., 2670v
Kielhauser, G., 219
Kilbuck, J. H., 223, 1452
Kimball, K., 3445
Kimbrough, W. D., 954
Kime, C. D., Jr., 4127r
King, J., 445s
King, J. R., 546, 3309
King, K., 2227, 3855r
King, K. M., 1786
King, L. J., 523e
King, N. C., 3175
King, N. J., 477, 2249
King, T. H., 1541
Kinpyo, T., 1837q, 3191q
Kiplinger, D. C., 887, 938, 2035, 3965, 4002, 4030x
Kirby, A. H. M., 389
Kirchhoff, R.-H., 2436, 2507
Kirjuhin, G. A., 414
Kirk, L. K., 880
Kirkham, D. S., 3501
Kirkpatrick, J. D., 2055
Kirkpatrick, T. W., 1235e
Kirton Experimental Husbandry Farm (N.A.A.S.), 4294o
Kishi, K., 378
Klan, Z., 4294j
Klang, C. A., 260n
Kleczkowski, A., 802g
Klein, A. K., 2865h
Klein, L. G., 260o
Klein, S., 2396
Klemmer, H. W., 1941
Klepač, A. G., 2865i
de Klerk, J. C., 1926
Kleščevič, N. F., 3711
Klimenko, K. T., 3070
Klindić, O., 3851
Klingbeil, G. C., 2503r
Klingler, J., 3551
Klinkenberg, C. H., 445p, 2671q
Klinkowski, M., 1538, 4030y
Klotz, L. J., 1038, 2094, 3083, 3085, 3098, 4108
Kluge, K., 275, 3421
Kluth, A., 974r
van der Knaap, W. P., 1113, 2170, 2181, 2285, 2292
Knapp, R., 3041x
Knappenberger, R. L., 1977
Knickmann, E., 212, 1249
Knight, A. H., 3287
Knight, F. P., 2037, 3041y
Knight, R., 1095, 1096, 2189
Knoblauch, F., 2865j
Knorr, L. C., 1011
Knott, J. E., 3855s
Knowles, P. F., 858
Knowles, W. H. C., 4205
Knust, H. G., 1235f, 2305y
Koch, E. C., 3532
Koch, G., 948
Koch, J., 3392
Koch, K. A., 733c
Koch, L. W., 1522
Kocjubinskaja, V. N., 149
Koek, P. C., 1837r
Kofranek, A. M., 515, 3953
Kogane-Charles, M., 857
Kohl, H. C., 3953, 4025
Kohl, H. C., Jr., 1978
Kolbe, M. H., 3426
Kolen, E. P., 810
Kolesnikov, V. A., 195
Kolesnikova, A. F., 2503s
Koller, D., 1374m
Kolomiec, I. A., 184
Konar, R. N., 2053p
Kondo, I. N., 2558q
Konovalov, I. N., 39
van Koot, Y., 579, 1716, 3855x
Kooyman, P., 3243
Koperžinskiĭ, V. V., 2919
Kopetz, L. M., 3703
Kordes, W., 931
Koremura, M., 1022
Koroleva, N. I., 3916
Koshimizu, T., 2049
Kosswig, W., 2865k
Köster, P., 906, 1988
Kostić, B., 3507
Kostik, F. D., 2670w
Kosugi, K., 2993
Koter, M., 2948 l
Koto, M., 994, 1025, 1032
Kott, V., 2500
Kovaljkov, F. V., 3845
Kovtunenko, I. P., 2995
Koyamu, K., 2197, 2909
Kozlova, V. I., 4127s
Kozma, P., 298
Kracovskaja, T. A., 2416a
Kragtwijk, C., 2991
Kramer, J. A., Jr., 523e
Kramer, P. J., 1337
Kramer, S., 260p, 3421
Krasnikov, B. V., 2790
Kraus, G., 2013
Kraus, K., 299
Krauss, B. H., 2223
Kravčenko, L. M., 2469
Kreutz, W., 2404
Krewson, C. F., 2384, 3267
Kribs, L., 2865g
Krickl, M., 531
Krider, M. M., 1912
Kriegler, P. J., 2644
Kriel, P. E., 2503z
Krische, P., 3201
Krishnamurthi, M. N., 2948m
Krisnamurthi, S., 727
Kristensen, H. R., 358, 2865 l, 3491, 3597t
Kristoffersen, T., 100, 2780, 2839, 2979, 2980, 2985, 3972
Krochmal, A., 1068 l, 3408m
Królikowski, L., 2948 l
Kroll, U., 847
Kromer, G. W., 3923
Kronenberg, H. G., 264, 274
Kropp, K., 2431, 2526, 2529
Krotkov, G., 30
Krotova, O. A., 650
Krug, C. A., 4162
Krüger, —., 1672
Krüger, K., 3709
Krumbiegel-Richter, B., 323
Krupka, L. R., 730, 2862
Krusberg, L. R., 2897
Krüssmann, G., 974s

Kubo, A., 4026
Kühn, H., 1374s
Kühnel, W., 381
Kuitert, L. C., 1893
Kumazawa, S., 574, 1947
Kummerow, J., 292
Kundu, B. C., 1954q
Kunitake, G., 3892p
Kunkel, L. O., 2319
Kunstmann, F. W., 3892o
Kunz, H. D., 430
Kunze, L., 974 l, 2577
Kuppuswami, B. S., 4255o
Kurata, H., 647
Kurokami, T., 1060
Kursanov, A. L., 2415r
Kurup, C. K. R., 2877
Kurup, C. N., 1468i
Kurup, P. A., 2948n
Kurup, P. G., 1136, 2910
Kuskie, S. J., 981
Kutáček, M., 3716
Kutty, O. V. U., 1135
Kuzjmin, A. Ja., 3442
Kvirikašvili, E., 2538
Kwate, B., 3281
Kwong, S. S., 209

van der Laan, P. A., 567
Laboratoire de Phytopathologie de Kaniama, 782
Labus, S., 326m
Lachman, W. H., 500, 3675
La Cour, L. F., 2010
Lacson, M. V., 4212
LaFollette, J. R., 1023
Lagasse, F. S., 2146
Laguía, P., 1056
Laibach, F., 4030z
Laíns e Silva, H., 1144
Laird, E. F., Jr., 1888
Lake, J. V., 2415s
Lal, G., 1059, 2864q, 3124, 3186, 3191r, 4124
Lal, K. N., 1205, 2256
Lalatta, F., 2572
Laloraya, M. M., 1875
Lamb, J., 1224
Lamb, J. G. D., 1391, 1813
Lamb, R. C., 268
Lambert, E. B., 1768, 1770
Lambert, H., 1965
Lamden, M. P., 263
Lamm, R., 732r, 2865m, 3832
Lamouria, L. H., 2141, 3455
Lamprey, H. F., 2154
Landbouw-Economisch Instituut, 260q
Landfald, R., 3394, 3403
Landrau, P., Jr., 1202, 1810
Lang, A., 3256, 3271
Lange, W. H., Jr., 1777, 2796
" De Lange Ossekampen ", Wageningen, 3234j
Langerak, D. I., 2553
Langkramer, O., 637
Langstron, R., 495
Lantz, H. L., 3624, 3626
Laoh, J. P., 1228
Laprade, J. L., 2721
Large, J. R., 1575
Larsen, R. P., 1520
Larson, R. E., 522, 2737f, 2836, 3818
Larsson, G., 2519
Lathrop, F. H., 1640k
Lathwell, D. J., 713
Latif, A., 3089, 4090, 4091, 4228, 4229, 4231
Lauden, L. L., 2276
Lauenstein, A., 582
Lauffer, M. A., 2319, 2908f
Laumont, 3855u, 3939p
Lausanne, Stations Fédérales d'Essais Agricoles, 2327
Lavender, L. E. and Co. Ltd., 247
Lavollay, J., 2415t
Lawrence, G. H. M., 869
Lawrence, J. M., 2127
Lawrence, W. J. C., 11, 105, 2318
Laycock, D. H., 1064, 4254y
Lazarević, B., 3552
Lazzarini, V., 4169
Leach, L. D., 2796
Lear, B., 2618, 2820, 2856
Lebeau, J. B., 3995
Łebkowski, J., 907, 2976
Lecat, P., 1500
LeCompte, S. B., Jr., 1688
Lecrenier, A., 208, 686, 3304, 3710
Ledbetter, M. C., 417
Ledin, G., 117t
Ledin, R. B., 2212, 2518
Lee, J. B., 605
Lee, L. A., 802r
Lee, R. K. S., 1075
Lee, W. A., 1468h
Lee, W. O., 1651, 2737m
Leefe, J. S., 614
Leeper, R. W., 2226
van Leer, R., 1839
Lees, K. A., 3597u
Leete, E., 3875
Lefèvre, F., 3102
Legge, J. B., 794
Lehmann, C. O., 698
Lehoczky, J., 370, 2804
Leiderman, L., 1019, 1171
Lein, H., 2770
Lelakis, P., 2613
Lelliott, R. A., 1974
Lemaire, R., 2521
Lemaître, R., 280
Lembright, H. W., 1589
Lemée, G., 2180
Lemonnier, M. A., 1036
Lenander, S.-E., 4000
Lengellé, M., 1954r
Lenné, E., 3356
Lentz, C. P., 1457
Leonard, A. S., 3482
Leonard, C. D., 2085, 3060, 3062
Leonard, E. R., 3821
Leopold, A. C., 50, 559, 1709, 2383, 2415f, 3902
Le Pelley, R., 1017
Lepp, H. P., 4176
Lerch, V., 966
Leroy, A., 930, 932
Leroy, J. F., 3333
Levadoux, L., 3438
van't Leven, J. A., 3387
Leverington, K. C., 4256a
Levin, J. H., 1454, 3395, 3408h
Lewis, C. E., 3041z
Lewis, D., 117u
Lewis, D. A., 3251
Lewis, G. D., 2590
Lewis, H. C., 1023, 4127t
Leyden, R. F., 2960
Leyvraz, H., 1491, 2541
Lherault, P., 2760
Li, K. C., 2503t
Liberman, J., 3322
Lieberman, M., 570, 2415u
Liebster, G., 2503u
Liefstingh, G., 2229, 2231
Liefstingh-Hardick, F. B., 2237, 2294
Lier, F. G., 2053q
Liera Gutierrez, G., 1068m
Liger, P., 2833
Light, W. I. St. G., 631, 1713
Likens, S. T., 1931
Liljedahl, J. B., 3692
Lilly, J. H., 1700
Lilly, L. J., 1746
Limasset, P., 1822
Lime, B. J., 4127u
Linck, A. J., 615
van der Linde, R. J., 1526, 1527
Lindemann, A., 70, 1964
Linden, R., 3304
Lindenmayer, A., 117p
Lindgren, D. L., 2068
Lindstrom, R., 4002
Lines, G. T., 4221
Lingle, J. C., 2795
Link, C. B., 951
Linke, H., 98
Linke, W., 1629
Linn, M. B., 3855x
van Lint, H., 3639, 4001, 4018
Lipp, A. E. G., 681
Lister, R. M., 2184
Littauer, F. S., 4102, 4127y
Little, H. B., 77

Little, T. M., 3855y
Littler, A. E., 1814
Litvinov, P. I., 2552
Liverman, J. L., 1327, 3256
Liwerant, J., 2462, 2548
Liyanage, D. V., 2195, 4151
Lizer y Trelles, C. A., 2641
Ljones, B., 2425
Ljukova, L. A., 2391
Llosa B., C., 628
Lloyd, P. J., 2852
Lloyd-Jones, C. P., 1308, 1632, 3275
Lo, T. T., 1210
Lock, F. W., 1800
Lock, G. W., 832, 2930
Locke, L. F., 3319
Lockhart, J. A., 3270
Lockwood, J. L., 3739
Locsin, C. L., 1204, 2726, 4212, 4213, 4220
Loeffler, G., 504
Loest, F. C., 2098
Loev, B., 523f
Loewel, E. L., 326m, 343, 2496, 3477, 3597v
Loewenberg, J. R., 604
Loh, C. S., 2252, 4254z
Löhnis, M. P., 1753
Long, W. G., 3278
Long, W. T., 1014, 2118, 3063
Long Ashton Agricultural and Horticultural Research Station, 1270, 4294k
Loomis, W. E., 446, 2737j, 3624
Loosjes, T. P., 6
López Arana, M., 1309
López-Matos, L., 1848, 2900
Loprieno, N., 1984
Lord, F. T., 2619
Lordello, L. G. E., 2210
Lorenz, O. A., 652, 3855v
Lott, J. R., 2379
Lott, R. V., 1440, 3375, 3376
Lott, W. L., 2503v
Lotti, A., 2053r
Lotz, E. v. d. S., 3316b
Loucks, K. W., 4103
Loue, A., 2206
Louis, A., 241
Loustalot, A. J., 815, 865h, 2729
Louvrier, J., 3110
Louw, D. F., 3191s
Love, W. E., 326p
Lovvorn, R. L., 1844
Low, J. B., 2653
Lowe, D., 3511
Lowe, E. A., 4255a
Lowig, E., 2395
Lowings, P. H., 572, 3529
Lozzia, G., 3116
Lubatti, O. F., 2815, 3768
Lucas, G. B., 790, 1896, 2897
Lucas, R. E., 2864z
Luck, J. M., 1285k, 4294 l
Łucka, M., 2431, 2526, 4262
Luckwill, L. C., 2382, 2484, 3414, 3416, 3493
Luddington Experimental Horticulture Station (N.A.A.S.), 3234k, 4294p
Lugo Lugo, H., 811
Lugovikov, L. A., 412
Lukton, A., 278
Lumry, R., 32
Lund, H. A., 63, 1903g
Lundegårdh, H., 1374n
Lundstad, A., 2025, 3351
Lunn, W. A., 2355
Lunt, H. A., 2349, 3942
Lunt, O. R., 3281
Lupetti Belviglieri, R., 3536
Lüthi, H., 140
Lüttmer, J., 1374s
Lutz, J. M., 1784
Lyall, L. H., 2758
Lyle, E. W., 939
Lynch, P. B., 3610
Lynch, R. S., 1335
Lynch, S. J., 3053, 3142, 3190, 4032
Lyon, C. J., 89

Maan, W. J., 3315w
Maatsch, R., 893, 899, 908, 974t, 1960, 3202, 3977
Mabrouk, A. F., 3855w
McAlister, H. J., 3576
MacAlpine, R. I., 4239
MacArthur, M., 2565, 2949
The Macauley Institute for Soil Research, 3220
McBride, J. J., Jr., 3078, 3091, 4128o
McBurney, A. D., 4031a
McCall, G. L., 519
McCallum, A. H., 3937
McCallum, D. W., 2865n
McCallum, E. S. R., 2416b
Maccario, G., 3042a
McClanahan, R. J., 796
McClean, A. P. D., 4078
McClellan, W. D., 940, 3021
McClung, A. C., 2503v, 3461
McClure, E. B., 2953
McClure, F. A., 864
McClure, T. T., 3518
McColloch, L. P., 2849
McColloch, R. C., 2087
McCollum, J. P., 728, 3855x
McCombs, C. L., 3830
MacConnell, J. T., 3937
McCoward, D. J., 1778
McCready, R. M., 1472
MacCreary, D., 2865o
McCully, W. G., 2737p
McCurdy, E. V., 2737q
McDaniel, J. C., 260r
McDonald, I., 670, 755, 1862
MacEachern, C. R., 548
McElwee, E. W., 3031, 3042b
McFadden, S. E., Jr., 3030
McFaul, J. A., 481, 1654, 1966
McFerran, J., 3813
Macfie, G. B., Jr., 3119j
McGeorge, W. T., 96, 1352, 1806
MacGillivray, J. H., 1725, 3750, 3850, 3855y, 3856z
McGrew, J. R., 3589
McIlrath, W. J., 675, 677
McKee, H. S., 605, 1743
McKeen, W. E., 1553
McKelvie, A. D., 2175, 2182, 4141
Mackenthun, K. M., 523g
McKern, H. H. G., 2927
Mackie, A., 2948o
Mackinney, G., 278
Mackinnon, W., 4255b
Maclachlan, G. A., 1322
MacLagan, D. S., 669
McLaughlin, J. H., 4144
McLean, D. M., 3855z
McLean, E. O., 3733
Maclean, J. A. R., 1235g
MacLellan, C. R., 420
McLeod, A. G., 744, 3877
Macleod, A. M., 1954v
Maclinn, W. A., 496
MacMahon, J. W., 260s, 1057, 3119k
McNab, J., 554
McNabb, H. S., Jr., 2668
McNulty, I. B., 1644
McOmie, J. F. W., 2316
MacPhee, A. W., 548
MacPhillamy, H. B., 865m
McTear, I., 2297
McWhorter, C. G., 2717
Madamba, U. V., 3861
Mader, P. P., 1535
Madras Department of Agriculture, 2328
Madsen, G. C., 848
Madsen, H. F., 2625, 2631
Maertens, C., 4264
Magelli, E., 1801
Maggs, D. H., 165
Magie, R. O., 2053s, 2999, 3000, 3001
Magness, J. R., 2503w
Mahlstede, J. P., 474, 880, 881
Mai, W. F., 2670x
Maistre, J., 1130
Malan, A. H., 1495, 1496
Malavolta, E., 1812, 3138, 4253
Malaya Department of Agriculture, 1271

Malcolm, J. L., 1811
Maldonado, E., 2052
Malenkina, I. A., 650
Maliga, P., 172, 2470
Malik, S. A., 3597w
Malimban, S. B., 3861
Maliphant, G. K., 1107, 1109
Mallik, P. C., 732s
Mallinjoud, H., 2670y
Mameli Calvino, G. E., 2951
Mamporija, F. D., 3119 l
Man, K. S., 3718, 3720
Manaresi, A., 3476
Mandryk, M., 783
Maneiro, J., 2305z
Manil, P., 850
Manintveld, J. C., 583
Manjanathaya, G. M., 4174
Mann, A. J., 3334
Mann, H. H., 3787
Mann, P. J. G., 2371
Mann, W., Jr., 2558x
Manning, D. T., 61
Manning, H. L., 2341
Manolache, C. I., 1590
Mansford, K., 2415v
Manson, G. F., 796
Mantari Camargo, C., 672
Mante, W., 3323
Manturova, I. M., 3719
Manuel, H. L., 2558r
Manzo, P., 2558s, 3353
Manzoni, L., 3456j
Mapother, H. R., 1657, 2189
Mapson, L. W., 2415w
Maramorosch, K., 2319
Marañon, L. T., 865n
Marar, M. M. K., 4255c
Marcelli, E., 736, 2908g
Marcellin, P., 196
Marchal, J., 3033, 3036, 3039
Marcussen, K. H., 3042c
Margolin, A. F., 161, 2503x
Marh, A. T., 3819
Mariconi, F. A. M., 2203 4172, 4175
Marinucci, M., 1053, 4127v
Märker, H., 1490
Markgraf, F., 2012, 2053t, 3042d
Markley, B. B., 2997, 2998, 3979
Markley, E., 62
Markley, K. S., 853, 3925
Markov, V. M., 3749
Marks, J. D., 3835
Markunas, P. C., 776
Markwardt, E. D., 523h
Marlatt, R. B., 1734, 2754, 3856g
van Marle, G. S., 2670z
Marloth, R. H., 3050, 3221, 4127w
Marlowe, G. A., Jr., 2841
de Marneffe, R., 1485
Maróti, M., 2878, 3856i
Marsh, R. W., 373, 374, 390, 3503, 3597x
Marshall, E. R., 509, 512, 523i, 3652, 3661
Marshall, H. B., 824
Marshall, J., 1621
Mársico, D. F., 1048, 3107
Marston, M. E., 117v
Martell, A. E., 2360
Martelli, G. P., 1638
Martelli, R., 2661
Marth, P. C., 2481
Martin, D., 2498
Martin, J. P., 2076, 2262, 3084, 3119m, 3191n, 4095
Martin, J. T., 390, 434, 435, 1189, 3597y
Martin, L. F., 1208, 2253
Martin, R. W., 974u
Martin, W. E., 3838
Martin, W. J., 731
Martini, C., 419
Marucci, P. E., 3563
Marvel, M. E., 732t
Marvin, J. W., 3929
Masak, E., Jr., 4147
Mason, B., 2669
Mason, D. D., 3240
Massachusetts Agricultural Experiment Station, 2417, 2513, 2738, 3222
Massal, E., 3191t
Massey, D. M., 3840
Mastalerz, J. W., 883
Masters, B. M., 1718
Masuda, S., 577, 2666
Masuda, Y., 117w
Masui, M., 1728
Mateo Box, J. M., 3751
Mather, J. C., 924
Mathias, M. E., 1959
Mathis, W. T., 3315x
Mathlein, R., 2671a
Mathrani, D. I., 785, 3882
Mathur, P. B., 1233
Mathys, G., 1586, 1587
Matsui, S., 1068n, 4126
Matsumori, H., 1738, 3747
Matthews, A., 1209
Matthews, J. N., 2894
Matthews, L. J., 2730, 3603, 3610
Matthews, R. E. F., 1785, 2319, 2893
Matthews, W. S. A., 2928
Mattoon, H. G., 957
Mattson, E. L., 445e
Matumoto, M., 574
Maurer, K. J., 157
Mauri, N., 2503y
Maurice, —., 732u
Mauritius Department of Agriculture, 4284
Mauritius Sugar Industry Research Institute, 3161
Maurizio, A., 969, 1428
Maxie, E. C., 3406
Maxwell, N. P., 3444, 4127e
May, C., 3307
May, P., 1497
May, W. B., 4031b
Mayagüez, Puerto Rico, Federal Experiment Station, 1272
Mayer, A. M., 2390
Mayer, K., 585
Mayne, J. E., 1235h
Meader, E. M., 3408z
Meadly, G. R. W., 3607
Medcalf, J. C., 2723, 3136, 3140
Medina, A., 1745
de Medina, A. R., 1235i
Medina, D. M., 4158, 4160
Medina, J. C., 3909
Medina Perez, J., 2209
Meenakshisundaram, D., 1837s, 4255d
v. d. Meer, F. A., 2580, 2671q
Meeuwse, P., 367
Meggitt, W. F., 2737r
Mehl, S., 3569
Mei, A., 2948p
Meidner, H., 1332
Meier, G., 1398
Meiffren, —., 1115
Meigh, D. F., 3400
Meijneke, C. A. R., 3491
Meljnikova, A. A., 3737
Meloche, H. P., Jr., 1772
Meltzer, J., 403, 445n
Melville, A. R., 4168
Melville, F., 352
Melvin, E. W., 708
Members of the Oil and Colour Chemists' Association, 1954s
Mendel, K., 4038
Mendes, A. J. T., 4158, 4160, 4161
Mendes, H. C., 2207
Mendes, J. E. T., 4255e
de Menezes, J. B. F., Jr., 2305z
Menges, R. M., 513, 3678
Menninger, E. A., 974v
Menon, A. K., 826
Menon, K. P. V., 1137, 2201, 3191 l
Menschoy, A. B., 1699
Menzies, J. D., 1708
Mercier, R. G., 2491
Merle, P., 4255f
Merrill, S., Jr., 1066
van der Merwe, W. J., 2982
Mesiano, E., 2702

Messenger, T. H., 2240
Messié, R., 1400
Messing, J. H. L., 4019, 4031c
Metcalf, R. L., 1631, 3203
Metlin, Ju. B., 3656
Meudt, W., 768, 2889, 3868
Meurman, O., 3345, 3409, 3826
Meyer, C. F., 3594
Meyer, F. G., 948
Meyers, W. A., 464, 465
Meynhardt, J. T., 301
Mezzetti, A., 2562, 2563, 3494
Michaelides, R. C., 2148m
Michel, B. E., 58
Michel, F., 3393, 3856e
Michelbacher, A. E., 422, 1595, 1613, 1735, 2632, 2633, 2647, 2651, 3544, 3550, 3556
Michigan Agricultural Experiment Station, 1285 l
Michigan State College, Department of Horticulture, 1374o, 1650, 1837t, 1837u
Micklem, T., 2503z
van Middelem, C. H., 2866q, 3241
Middleton, J. T., 25, 2092, 3245, 3246
Middleton, L. J., 1331
de Migoya, A. E. de E., 1468j
Mihaleva, E. N., 39
Mihlin, D. M., 3939q
Mijušković, M., 3567
Mika, E. S., 2918
Mikhailov, M. K., 2886
Milad, Y., 2415x
Milaire, H., 1599, 4013
Milbrath, J. A., 2671x
Miles, M., 1796, 2865p
Miletić, R., 4031d
Miljčevskii, E. A., 412
Miller, A. E., 2702
Miller, C. D., 1152, 2304
Miller, C. O., 772
Miller, D. B., 990
Miller, E. V., 1232, 2702, 2767
Miller, G. W., 38, 3259
Miller, H. N., 1981, 3032, 3038
Miller, J. C., 529
Miller, L. A., 3746
Miller, L. P., 433
Miller, M. P., 2063, 3066, 4127x
Miller, P. M., 1581, 2671b, 3527
Miller, P. W., 3499, 3537
Miller, R., 3974
Miller, R. W. R., 2151
Miller, W. W., 2148n
Millikan, D. F., 1540, 1543, 2576
Millikan, D. F., Jr., 1542
Mills, D. R., 427
Mills, J. S., 865o
Milne, R. L., 3451
Milosavljević, M., 3443
Milthorpe, F. L., 2415y
Minamikawa, J., 4245
Minessy, F. A., 4056
Minev, K., 1567
Minges, P. A., 3831, 3855y
Ministerie van Landbouw *see* The Hague
Ministry of Agriculture, London, 227, 260t, 262, 445q, 523j, 552, 642, 865p, 1273, 1297, 1640 l, 1787, 1788, 2410, 2492, 2504a, 2504b, 2504c, 2504d, 2558t 2671c, 2671d, 2671e, 2671f, 2865q, 2865r, 2865s, 3042e, 3234 l, 3234m, 3234n, 3234o, 3598a, 3856a
Minnesota Agricultural Experiment Station, 1285m
Minshall, W. H., 1671, 3693g
Minz, G., 3099
Miotto, G., 2606
Miranda de Onís, J., 3945
Mirzabekjan, R. O., 2586
Mišareva, N. T., 2905
Misra, A. L., 2948o
Missonnier, J., 2650
Michell, G. H., 1705
Mitchell, I. L. S., 1940
Mitchell, J. W., 2481
Mitchell, T. B., 1602
Mitchell, W., 865q
Mitić-Mužina, N., 3555
Mitidieri, J., 2221
Miyagi, K., 2822
Mochizuki, T., 3408n
Modlibowska, I., 348, 1530
Moens, R., 2757
Mohanty, N. N., 1825
Mohanty, U. N., 1825
Mohr, H. C., 587
Mohrer, I., 1055
Möhring, H. K., 870, 3348
Moity, M., 2159
Moja, A., 2948q
de Mol van Oud Loosdrecht, W. E., 974w, 2053u, 2053v, 2053w, 3042f
Molčanov, I. I., 2437
Molenaar, A., 3294
Moller, R. B., 462
Molotkovskiĭ, G. H., 33, 2557
Molotkovskiĭ, Ju. G., 33
Monachino, J., 3939r, 3939s
Monciero, —., 3101
Monjes, P. H., 2250
Monnet, J., 1086
Monroe, R. J., 1837m, 3240
Monselise, J. J., 3096
Montégut, J., 849
Montgomery, D., 3693h
Montgomery, N., 2831
Montgrain, C., 3293
Monzini, A., 1467, 3407
Moore, E. L., 560, 799, 3892k
Moore, J. A., 2935
Moore, J. F., 498, 502, 3674
Moore, M. H., 388, 389
Moore, P., 987, 3119n, 4127z
Moore, R. H., 865r
Moore, W. D., 1759
Moore, W. T., 2669
Moreira, S., 4071, 4076, 4077
Morel, G., 877
Moreland, C. F., 2388
Moreton, B. D., 565, 639, 1713, 2812
Morettini, A., 2420
Morgan, C. V. G., 1621
Morgan, N. D., 3279
Morgan, N. G., 117x, 374, 399, 435, 1074, 3503, 3540, 3586, 3597r, 3597s
Morgan, O. D., 2617
Morishita, F. S., 4005
Morita, Y., 3067
Morris, D. S., 1585
Morris, L. G., 111, 1355, 3300
Morris, L. L., 3831
Morris, M. P., 4178
Morrison, H. E., 2933
Morrison, K., 3856b
Morrissey, S., 1987
Morrow, R. R., 1950
Mors, W. B., 2920
Morschel, J. R. G., 1560, 1729
Mortensen, E., 117y
Morton, J. F., 3191u
Morton, H. C., 4255g
Morvan, G., 2671g, 2671h, 3491
Moser, L., 3474, 3535
Moss, A. E., 1235j
Moss, N., 3801, 3802, 3805
Moss, R. I., 1147
Mosse, B., 1419, 2534, 3355
Mossop, M. C., 1997
Mothes, K., 1319
Mott, R. C., 2021
Motts, G. N., 2504e, 2504f, 2558u, 2865t
Mouat, H. M., 3119o
Moulton, J. E., 2558v, 3456k
Mountain, W. B., 1897
Mouranche, R., 831
Mourkides, G. A., 717
Moustafa, E. M., 2415w
Moutia, L. A., 3121
Mowat, J. L., 873
Muhammad, W., 4091, 4202, 4207, 4214, 4215, 4216, 4223
Mühlmann, H., 423

van den Muijzenberg, E. W.B., 104, 4286
Muir, R. M., 1374p
Mukasa, S., 1032
Mukerjee, P. K., 3106
Mukherji, D. K., 1683
Mulder, D., 356, 3201, 3491, 3598b
Mulder, E. G., 1691
Mullenders, W., 2305o
Muller, C. H., 3274
Müller, F. P., 445r
Müller, G., 3504
Müller, H. J., 3194
Müller, H. W. K., 2963, 3543, 3959
Müller, O., 1879, 3892 l
Müller, R., 1868, 1869, 1870
Müller, W., 1903e
Muller, W. H., 3274
Mullett, R. P., 2894
Mullin, R. S., 2865u
Muma, M. H., 2101
Mune, T. L., 3606
Munier, P., 1039, 4111
Munnecke, D. E., 3037
Munro, J. W., 445s
Murai, M., 2304
Murakami, H., 1414
Murakishi, H. H., 1058
Murata, N., 1068n, 4126
Murawski, H., 138, 3328
Murneek, A. E., 2474
Murphy, H. J., 3665
Murphy, W. S., 93
Murray, D. B., 1100, 1102, 1103, 1106, 1114, 2176
Murray, H. R., 163
Murray, P. M., 1954j
Murwin, H. F., 4285
Musahib-ud-Din, 3058
Mustard, M. J., 3053, 3120, 4034
Muthana, M. S., 1918
Muthu, M., 3122
Muthukuda, D. S., 2242
Muthuswamy, S., 4031j, 4255o
Muzik, T. J., 476, 2729, 4190
Myer, F. W., 3973
Myers, J. M., 1861
Myrstad, A., 2864s, 2865v
Mysore Horticultural Society, 2338

N., E., 1173
Naaldwijk Research Station for Fruit and Vegetable Growing under Glass, 3223
N.A.A.S., 1287, 3234k, 4294m, 4294n, 4294o, 4294p
Nada, I. A. A., 2786, 2787
Nadal, N., 2306m
Nadel-Schiffmann, M., 4105, 4110, 4127y
Naef-Roth, S., 1820, 2854
Naegele, J. A., 974x, 4006
Naegeli, W., 2346
Nagaraj, A. N., 2201
Nagata, T., 4243, 4244
Nagayoshi, H., 645
Nagels, W., 3730
Naghski, J., 1954t
Nagpal, R. L., 3051
Naik, K. C., 2310
Nair, T. G., 2306a
Nakagawa, M., 190
Nakamura, S., 537
Nakasone, H. Y., 4177, 4255h
Nakata, S., 2129, 3105
Nakayama, A., 3649, 4240
Nambiar, K. K., 806
Nambiar, K. P. P., 4185
Nanayakkara, H. E., 2306b
Nanz, R. A., 3104
Napier, C. L., 20, 683
Napier, E. J., 2802
Narasaki, T., 1054
Narvestad, K., 2762, 2763
Nastev, D., 1487, 1488
Nataljina, O., 335
Natarajan, C. P., 3192o
Natesan, P. K., 1905
Nathanael, W. R. N., 2195
National Institute of Agricultural Botany, Cambridge, 3695, 3856c
The National Research Council of Canada, 1945
National Rose Society of Great Britain, 3015
National Shade Tree Conference, 3234p
National Vegetable Research Station, Wellesbourne, 4293
National Weed Committee, Canada, Eastern Section, 2675
National Weed Committee, Western Section, 1641
Natti, J. J., 1685, 1739, 2768, 3727
Naude, C. P., 3609
Naude, T. J., 1648, 3224
Nauer, E., 987, 3119n, 4127z
Naugoljnyh, V. N., 2778
Nauriyal, J. P., 3074
Navarro, A. F., 64
Naves, Y.-R., 865s
Navia, J. M., 1837v
Nazarov, S. P., 2835
Nayar, T. G., 1080
Neal, O. M., 124
Neale, F. E., 2354
Neas, I., 764, 802m
Neas, M. O., 1890
Nečiporčuk, J. D., 3911
de Neef, J. C., 4254v
Neergaara, P., 3234a
Negi, N. S., 4203
Negroul, A.-M., 3456 l
Neher, D. D., 3466
Neiswander, R. B., 408, 2000
Nekljudov, B. M., 3762
Nel, R. I., 3225
Nelder, J. A., 3805
Nelson, C. D., 30
Nelson, K. S., 887, 2035, 4030x
Nelson, L. G., 2746
Nelson, P. K., 882, 3942
Nelson, R. O., 3142, 3187, 4032, 4113
Nelson, S. H., 154, 229, 1417, 2442, 2477
Neri, M., 1510m
van de Nes, A. G. A., 2992
van Nes, A. R., 10, 3243
Nestel, L., 1743
Nestererova, G. N., 3702
Nesterova, E. I., 3702
Nethsinghe, D. A., 4255i
Nettles, V. F., 707, 2751, 2792
Neumann, U., 3412, 3413
Neururer, J., 1626
Nevarez, J., 3188
Neveling, C. H., 3226
Newhall, W. F., 1031, 1033, 3100, 4128a
Newmark, P., 2908h
New Hampshire Agricultural Experiment Station, 3227
New York State Agricultural Experiment Station, 1285n
New Zealand Department of Agriculture, 2329
New Zealand Department of Scientific and Industrial Research (D.S.I.R.), 1261
Neybergh, A. G., 1129
Neyland, M., 3315y
Nicholas, D. J. D., 562, 1308
Nichols, A. F., 832
Nichols, R., 1114
Nicol, J., 1118, 1123, 1124
Nicolaisen-Scupin, L., 244
Nicolin, P., 1410
Nielsen, G., 3315z
Nieman, R. H., 611
Nienstaedt, H., 2555
Niering, W. A., 523k, 3608
Nigeria Department of Agriculture, 2340h, 4294q
Nightingale, G. T., 1241
Nightingale, J. W., 1291
Nikitin, G. I., 3437
Nikolaev, P. I., 413
Nilsson, F., 133, 260u, 2429
Ninomiya, K., 1774
Nirula, K. K., 1139, 2202
Nishida, T., 591, 2130

Nishii, K., 2011
Nishikawa, G., 759
Nishiura, M., 993
Nixon, R. W., 1041
Njoku, E., 3969
Nogueira, R. K., 4165
Nolen, C. P., 2155
Noll, C. J., 503, 508, 3654
Nolte, H.-W., 2819
Nonaka, M., 589
Nonnecke, I. L., 3771
Noonan, J. C., 2722
Noordam, D., 523 l
Nordby, A., 3598c
Nordström, C. G., 2053b, 3042g
Norman, A. G., 54, 68, 1942
Normand, M., 4286
Noro, K., 982, 1049
Norris, M. J., 2687
Norris, W. E., Jr., 43
North, C., 526
North, C. P., 989
North Borneo Rubber Fund Board, 4255j
North Carolina State College School of Agriculture, 1274
North of Scotland College of Agriculture, 1275, 4294r
Ností Nava, J., 3292
Nottingham University, School of Agriculture, 4292
Nour-Eldin, F., 4128b
Novikof, V. A., 732x
Nowakowski, K., 3790
N.S.W. Department of Agriculture, 159, 732w, 974y, 1607
N.S.W., Department of Agriculture, Biological Branch, 535
Nuernbergk, E. L., 1374q
Núñez Meléndez, E., 3939t
Nusbaum, C. J., 1895
Nutman, F. J., 2199, 2200
Nutter, G. C., 2018
Nuttall, V. W., 533
Nybom, N., 3276, 4271
Nyhlén, Å., 232, 3398
Nyland, G., 2578
Nylund, R. E., 3627

Oatman, E., 2632, 2633, 2647
Obaidullah Jan, M., 4217, 4218, 4255k
Ober, D. E., 1972
Oberholzer, P. C. J., 2097
Oberthür, K., 1900, 1901
Obodovskaja, D. A., 819
Ochs, G., 2583
Oddie, B. C. V., 1299
Oderkirk, G. C., 1618
Odland, M. L., 503, 508, 3654
Oechsli, L. P., 2165
OEEC *see* Organization
Office de la Recherche Scientifique et Technique Outre-Mer, 4287
Ōgaki, C., 199
Ogawa, J. M., 1563, 2614, 2657
Ogihara, R., 42
Ognianoff, I., 1921
Oguro, E., 2475, 3367
Ōhata, T., 993
Øhlers, H., 2476
Okada, M., 3008
Okamura, A., 3008
Okamura, T., 2866g
Okasako, Y., 537
Oknina, E. Z., 3249, 3442
Okudai, S., 1015, 1063
Okuyama, M., 769
Oland, K., 3385
Oldén, E. J., 349, 2504g, 4271
Olgyay, M., 370, 2804
Oliferov, A. N., 84
de Oliveira, M. A., 1686
de Oliveira, W., 2148o
de Oliveira e Silva, F. C., 3191v
Oliver, R. W., 2053x, 3042h, 4031e
Ollagnier, M., 1159
Olmo, H. P., 3325
Olsen, O. B., 329
Olson, E. O., 4075, 4127h, 4128c
Olson, R. F., 28
Olstad, O., 3574
Ono, H., 575, 3796
Ono, T., 2560, 3464
van Onsem, J. G., 884, 905
Ontario Department of Agriculture (Vineland), 3228
Oohata, T., 999
Oort, A. J. P., 2865w
Oostenbrink, M., 3538
von Oppenfeld, H., 2014
Oppenheimer, C., 129, 1078
Ordas, E. P., 3594
Ordish, G., 327, 4263
Orellana, R. G., 2306c, 3191w
Organization for European Economic Cooperation (OEEC), 87, 3286, 4286
Orlando, A., 1150
Ormos, I., 868
Orr, K. J., 1152
Ortego Nieto, J. M., 2135
Orth, H., 632, 3693i
Ortiz Ramirez, G., 1841, 3859
van Os, F. H. L., 865t, 3939u
Osaki, S., 3662
Osborne, D. J., 1336
Osborne, R. E., 1081
Oseledec, N. N., 2908j
Oste, C. A., 984, 4067
Ostendorf, F. W., 2191
Østergaard, J., 4031f
Otagaki, K. K., 2143
Oteifa, B. A., 1761
Otey, G., 4066
Otten, E., 3194
Otto, A., 1991
Ounsworth, L. F., 4285
Outland, C. E., 545
van Overbeek, J., 3265
Overcash, J. P., 297, 302, 2570, 3598d
Overman, A. J., 2019, 2753
Ovington, J. D., 2053y
Owen, H., 4145
Owen, O., 3302
Owen, P. C., 3880
Ownbey, M., 1837w
Øydvin, M., 2464
Oyer, E. B., 1562
Ozaki, C. T., 617, 1835, 2859
Ozaki, H. Y., 2859
Ozawa, H., 900

Paardekooper, E. C., 2230, 2287, 4192, 4193, 4195, 4196
Pacheco M., F., 1837c
Paci, P., 1837x, 4128d
Padfield, C. A. S., 182, 1462, 1465, 1466
Paech, K., 1967
Pagacz, E., 4166
Pagán, C., 815
Page, J. B., 117d
Page, O. T., 654
da Paixão-Correia, C. A., 3938
Paleg, L. G., 802n
Palladini, G., 1638
Palmer, A. E., 4218
Palmer, J. K., 2883, 2887, 2908k
Palmer, K. N., 1162
Palmer, L., 1535
Palser, B. F., 675
Paltridge, T. B., 2195
Panaretos, A., 1068o, 2149p
Pandeya, S. C., 3258
Panella, A., 2044
Paneth, D., 3299
Panse, T. B., 802 l
Papadantonakis, S., 2148v
Papai, M. J., 509
Papasolomontos, A., 1468k, 1476, 3856d
Pape, H., 974z, 3012
Pappas, J. L., 3093
Pardy, A. A., 860
Parfenov, A. T., 2465
Parham, J. W., 3606
Parish, D. H., 3167
Parker, J., 3316a
Parker, K. G., 2670x
Parker, S. S., 1098
Parkey, W., 3924

Parkin, E. A., 1764
Parr, W. J., 3847
Parris, C. G., 2737s
Parrish, D. B., 94
Parsons, H., 1242
Parthasarathy, S. V., 1192
Parunakjan, E. K., 2865x
Pascale, A. J., 1528
Passecker, F., 219, 2432
Pastac, I. A., 1670, 1750
Pastoriza, R., 1461
Pasture, E., 688
Patel, M. S., 802o, 3892m
Pates, A. L., 848
Pathak, S. P., 2948r
Paton, A. M., 2989
Paton, D. M., 607
Paton, M. R., 3042i
Patrick, A. D., 4255 l
Patrick, Z. A., 1523
Patron, A., 1068p, 3393, 3856e
Pattanaik, S., 713
Patterson, N. A., 420
Patterson, R. E., 439
Pauck, P., 2818
Paul, H., 1194
Pavićević, B., 189
Peabody, D. V., Jr., 3635, 3636
Pearce, S. A., 2307, 4031g
Pearce, S. C., 2399, 3242
Peard, R. H., 4186
Pearl, R. T., 1243
Pearman, R. W., 2947
Pearse, H. L., 3864
Pease, R. W., 894, 958, 959
Peck, N., 1364
Pedersen, K., 3209
Peereboom, N. J., 2269
Peleg, J., 3086
Pélegrin, P., 1084
Peljtihin, S. V., 222
Pellegrini, G., 3114
Pellegrino, D., 1812
Pelucca, E., 4031h
Pen, F., 2304
Penfold, A. R., 2927
Pengelly, R., 2706
Penka, M., 2368
Penman, H. L., 2351
Penningsfeld, F., 875, 975a
Pennsylvania Agricultural Experiment Station, 3234q
Pénzes, A., 952
Perdomo, J. E., 2908 l
Pereira, H. C., 2205
Perera, S. S., 4238
Peretz, I., 3548
Peries, O. S., 2306d
Perk, C. G. M., 3191x
Perraudin, G., 344, 3848
Perrier de la Bathie, H., 2306e
Perry, B. A., 3774
Perry, F., 975b
Perry, R. L., 1068u, 2123
Persson, A. R., 79, 2865y, 3777
Perucci, E., 2904
Pessi, Y., 1298, 3484
Pétard, P. H., 1917
Pételot, A., 2306f
Peters, B. G., 549
Petersen, H., 1962
Petersen, H. I., 2737t
Peterson, A. S., 3920
Peterson, G. D., Jr., 3092
Peterson, N. K., 2415z
Peterson, P. A., 2062
Peterson, R., 3408 l
Petrenko, A. G., 2905
Petrik, C., 3769
Petronici, C., 3856f
Petrovskaja, T. P., 3252
Pettersson, F. A. S., 3957
Pettersson, S., 3516
Pew, W. D., 3856g
Peyer, E., 1510n, 2539
Peynado, A., 4050, 4066
Pfeifer, R. P., 2393, 2671i
Pfeiffer, R. K., 114, 3599
Pflug, I. J., 2494, 3311
Philipp, F., 532, 1837y
Philipp, W., 1871, 1882, 1903h, 3892n
Phillips, E. L., 576, 595
Phillips, M., 802p
Phillips, M. A., 1640m
Phillips, W. M., 523m, 635, 2679
Phillips, W. R., 118g, 229, 230, 233, 239, 250, 260v, 690, 1459, 2442, 2497
Philp, J., 3694
Phipers, R. F., 3939d
Phoa, K. L., 4199
Piaget, J. E. H., 307, 3316b
Picco, D., 2851
Pichel, R. J., 4264
Pickard, J. A., 434
Pickering, G. B., 2928
Pickett, B. S., 2568
Pickles, A., 2164
Pienaar, W. J., 1303, 3316b
Pieniązek, S. A., 216, 1509
Pieri, G., 1552, 2608, 2634
Pieris, W. I., 4255m
Pieris, W. V. D., 1132, 1141
Pierson, C. F., 733k
de Pietri-Tonelli, P., 2643
Pillai, N. C., 1954u
Pillai, N. K., 2306g
Pingale, S. V., 3122
Piquemal, —., 3939p
Piquer, G., 2838, 3710
Pires, J. A., 1213
Pirie, N. W., 1373
Piringer, A. A., 961, 3431, 4167
Pirovano, A., 1402
Pirson, A., 1374r
Pitcher, R. S., 2671j
Plaisted, P. H., 53, 1807
Plakidas, A. G., 3028
Plank, H. K., 1140
van der Plank, J. E., 3080
Plant, W., 666, 3723
Plant Protection Ltd., 2673
Plantenziektenkundige Dienst, Wageningen, 2330, 3597z
de Plater, C. V., 1367
Plaut, M., 3297
Playfair, L., 3693j
du Plessis, S. J., 135
Plock, H., 260w, 1533, 2430, 2444, 2504h
Plumier, W., 3006
Plunkett, R. A., 4147, 4255n
Poapst, P. A., 230, 233, 239, 250, 260v, 387, 690, 1459
Podešva, J., 555
Podubský, V., 3204
Poignant, P., 2690
Polaćek, K., 3086
Polak, E., 867
Polhamus, L. G., 4191
Poliakoff, J., 1949, 2306h
Poljakoff-Mayber, A., 1330
Poljakov, I. M., 3581
Pollack, B. L., 2836
Pollard, A., 3408o
Pollard, D. G., 3856h
Pollard, F. H., 2316
Pollock, J. R., 1212
Polsinelli, M., 326e, 1510i
Poma Treccani, C., 202, 1498
Pontovič, V. E., 3939v
Popenoe, J., 2461
Popenoe, W., 1071
Popoff, A., 1946
Popovich, M., 1737
Porlingh, I. X., 3354
Porritt, S. W., 231, 234, 235, 242
Porter, H. K., 2908i
Porterfield, W. M., Jr., 829
Portsmouth, G. B., 458, 467, 1218, 1220, 1221, 1224, 3191y
Posnette, A. F., 354, 1117, 1537, 2573, 2574, 2671k, 3491, 3597j
Post, A., 1584
Postlethwaite, J. D., 1368
Potapov, N. G., 3856i
Potter, F. G., 1837z
Potter, G. F., 1066
Potter, H. S., 2617
Pound, G. S., 1885, 1886, 2891, 2892
Pouwer, A., 3383
Powell, H. R., 2463
Powell, L. E., Jr., 2484, 3408p
Powell, W. A., 802r
Powers, H. R., Jr., 790
de Prado, F. A., 3856j

Praloran, J.-C., 980, 3077
Pramer, D., 3967
Prasad, A., 2457
Pratt, P. F., 93
Pratt, R. M., 2108
Preece, I. A., 1954v
Preiss, F., 289
Prescott, G. C., 2671 l
Presley, H., 675
Prest, R. L., 1392, 2220, 4128e
Preston, A. P., 260x, 2504i
Preston, R. D., 1742
Preston, W. H., Jr., 951, 2481
Prevost, H., 3425, 3776
Prevot, P., 1159, 1160
Price, J. R., 3316c
Price, O., 2415e
Pridan, O. G., 3781
Pridham, J. B., 1525
Prihodjko, S. N., 3005
Princ, Ja. I., 411
Prince, V. E., 174
Proctor, J. M., 3856k
Proebsting, E. L., 448, 1443
Pronk, F., 1156, 2290
Prosser, D. S., Jr., 1640n, 4098
Pruthi, J. S., 1059, 3191r, 4124
Przygodda, W., 3573
Pšenova, K. V., 3939w
Pucci, E., 2662
Puccini, G., 2003
Pujol, R., 2303
Purseglove, J. W., 1285s
Purvis, E. R., 2415m, 2415z
Putman, W. L., 410, 2670d
Puttarudriah, M., 804, 2053z
Puzzi, D., 2105
Puzzilli, M., 2908m
Py, C., 1166, 1167, 1168, 1172, 2224
Pyfrom, H. T., 2370
Pyriki, C., 2908n, 3892o

Quadt, F., 732y
Quagliotti, F., 3775
Quantz, L., 618, 1756
Quarrell, C. P., 3725
Quayle, J. R., 3939x
Quddus, Q. A., 4084
Queensland Bureau of Sugar Experiment Stations, 2248
Queensland Department of Agriculture, 2331
Quinlan, L. R., 4030w

Raabe, R. D., 3018
van Raalte, M. H., 2781
Rabb, R. L., 1903i, 3886
Rabechault, H., 1131
Rabson, R., 3901
Raciti, G., 1004, 2084, 2086
Rada, B. F., 2779
Radhakrishnan, A. N., 29
Radhakrishnan, T. V., 648
Radomir, S., 3894
Radwan, A. A. M., 2846
Raeber, J. G., 802q
Raen, F., 3456m
Rafaat, A., 2786, 2787
Rahman, R.-u., 3095, 3103
Rahn, E. M., 3653, 3664, 3758
Rai, G. S., 1667
Rai, J. N., 3192z, 4031i
Rake, B. A., 266, 3424
Rakitin, Ju. V., 2480
Raleigh, S. M., 439
Ralph, C. L., 40
Ramakrishnan, T. S., 4249
Ramanathan, K. R., 2255
Ramaratnam, D. S., 3892m
Ramaswami, K., 2306i, 3408q
Ranaweera, D. J. W., 4247
Randolph, J. W., 1929
Randolph, L. F., 3984
Rands, R. D., 4191
Ranjan, S., 1875
Rao, A. S., 1918
Rao, C. V., 2054a
Rao, G. R., 4224
Rao, J. S., 2054b
Rao, J. T., 4204
Rao, K. R., 3456n
Rao, M. B. S., 865u, 2197
Rao, M. S. S., 2256, 4203
Rao, N. S., 1954q
Rao, N. V. M., 4224
Rao, P. G., 792, 1646
Rao, P. S., 1235k
Rao, U. N., 4031j, 4255o
Rao, V. N. M., 3408r, 4251
Rao, V. S., 2054c
Rapallo Abad, J., 4041
Raper, R., 2415v
Rappaport, L., 679, 3800
Raski, D. J., 2618
Rasmussen, C. R., 636
Rasmussen, L. W., 3693 l
Ratnaweera, E. W., 4031k
Ratvik, H., 2762, 2763, 3777
Rautou, S., 2942
Ravensberg, K., 3301, 3950
Ravn, K., 2737t
Rawlins, W. A., 732z
Rawson, J. M., 2970
Raybould, F. W., 523n
Raymond, J. C., 3684
Raymond, W. D., 2945, 3119p
Rayner, R. W., 3192a, 4170
Rea, H. E., 2685, 2687
Read, W. H., 3744, 3745
Rear, J., 2865z
Rebour, H., 996
Rebstock, T. L., 1338
Reddy, B. R., 2751
Reddy, D. B., 2306s
Reed, C. A., 2317
Reed, L. R., 3856 l
Reese, G., 2967
Reeve, E., 1767
Reeves, E. L., 3598e
Regel, C., 3906
Reggiani, F., 3456o
Regragui, B., 3562
Rehbein, C. A., 2272
Rehm, S., 1748, 2864r
Reich, H., 377, 445t, 2654
Reichart, N. A. R., 1676
Reichel, M., 1415
Reichert, I., 1010, 4080, 4081, 4083
Reid, R. D., 271, 272, 2558w
Reidl, W. A., 3927
Reilly, G. W., 3588
Reimer, C. A., 3615
Reingard, T. A., 3919
Reinhold, J., 103, 674
Reinouts van Haga, P., 2913
Reisaeter, O., 941
Reithel, F. J., 4255p
Reitz, H. J., 1014, 2118, 3063
Renard, W., 107
Renaud, M., 2467
Renaud, P., 2137
Renault, R., 1244
Renner, O., 4020
Rentschler, W., 2343
Resende, F., 929, 3257
Resnik, F. E., 802r
Resnik, M. E., 4058
Retan, A. H., 1613
Reuther, W., 1347, 3054
Revilla Morante, V. A., 627, 1732, 1758, 3743
Reynaud, P., 1087
Reyneke, J., 2868
Reynolds, J. D., 1754
Reynolds, P. A., 1245
Reynolds, T. M., 259
Rheaume, B. J., 233
Rheinhold, J., 1830
Rhoades, D. G., 346
Rhoads, W. A., 3282
Rhodes, A., 1975
Rhodes, E. A., 1644
Rhodes, G. N., 2894
Rhodesia and Nyasaland Federal Ministry of Agriculture, 1276
Rhododendron-Gesellschaft, Bremen, 3040, 4023
Ribaldi, M., 2609
Ribeiro, B. L., 1150
Rice, E. L., 117z, 3834
Rice, R. R., 1440, 3375, 3376
Rich, A. E., 2663, 3496
Rich, S., 3741, 3808
Richard, E., 4128f
Richard, J., 753
Richards, A. G., 3312
Richards, A. V., 809, 1110, 2166
Richards, R. R., 695

Richards, S. J., 1006
Richardson, B. H., 733a
Richardson, H. H., 1606
Richardson, S. D., 4014, 4015
Riches, R. C. B., 3890
Richmond, J. W. S., 886
Richter, H., 445u
Rick, C. M., 1802
Ricker, D. W., 2066
Ridpath, M. G., 1640q
Riehl, L. A., 1016, 3075
Riemann, F., 1294
Ries, S. K., 497, 499, 2715, 2718, 3677
Rietsema, I., 283
Rigg, H. H., 461
Riggs, R. D., 2671m
Rijsten, E. G., 2658
Riker, A. J., 1941
Riley, H. P., 1344
Ripley, G. W., 1742
Ripley, L. B., 3932
Risdon, E. J., 2242
Ritchie, J. L., 1315
Ritter, C. M., 2426, 3378
Ritty, P. M., 2020
Rivals, P., 320
Rivnay, E., 4085
Roach, F. A., 2504j
Robb-Smith, A. H. T., 1397
Robb, T. R., 3598f, 3598g
Robbins, P. W., 3456p
Robbins, W. A., 1767
Robert, E., 18
Roberts, A. N., 276
Roberts, D., 1426
Roberts, E. A. H., 4255q
Roberts, E. C., 1692
Roberts, F. M., 2199, 2200
Roberts, H. A., 1669, 3670
Robertson, R. N., 41, 605, 1333, 1743
Robertson, W. F., 1451
Robin, F., 2504k
Robins, J. S., 2793
Robinson, D., 3652, 3661
Robinson, D. B., 3724
Robinson, J. B. D., 3192b, 4168
Robinson, P., 1300
Robinson, R., 865a
Robison, R. S., 1980, 3967
Robles, P. S., 865h
Rocchetti, G., 4255r
de la Rocha G., G., 976, 1051, 1704, 4128g
Roche, W. J., 3390
Rochecouste, E., 2725, 3169
Rod, J., 3893
Rodgers, E. G., 2737s
Rodionenko, G. I., 3007
Rodionov, A. P., 2567
Rodney, D. R., 4070
Rodrigo, D. M., 3862
Rodrigues, A., 326n, 326o
Rodríguez, C., 3469
Rodriguez G., A., 1146
Rodriguez, T., 4128c
Rodriquez, D. W., 2306j
Roediger, H., 2639
Rogers, B. J., 1312
Rogers, B. L., 3379
Rogers, H. H., 1095, 1096, 2168
Rogers, W. S., 1530, 2440, 2522
Rogerson, A., 3192c
Roghani, M. S., 1068q
Rohloff, I., 2988
Rohrbaugh, L. M., 117z, 3834
Rohrbaugh, P. W., 4046
Roistacher, C. N., 1038, 3098, 3306, 4108
Røkholt, H. M., 3408s
Roll-Hansen, J., 2866a
Roller, E. M., 760
Romand, J., 3065
Romanelli, O., 1536
Romanko, R. R., 364, 3500
Romney, E. M., 3282
Romney, V. E., 619
Romshe, F. A., 2866b
Roney, E., 2593, 3515
Rönspiess, S., 872
Roodenburg, J. W. M., 101
Roosje, G. S., 1558
Rootsi, N., 211, 2458
de Ropp, R. S., 62
Rosanoff, B. P., 1718
Rosella, E., 1574
Rosemaund Experimental Husbandry Farm (N.A.A.S.), 4294o
v. Rosen, A. S. H., 3575, 3968
Rosene, H. F., 46, 2379
Rosenquist, E. A., 4183
Rosewarne Experimental Horticulture Station (N.A.A.S.), 1287
Ross, A. A., 4128e
Ross, R., 4017
Ross, W. C. J., 1954f
Rota, P., 2623, 2636
Roth, L. F., 3537
Rothrock, J. W., 2853
Rougieux, R., 4106, 4107
Rouillard, G., 3165, 3167
Rouse, A. H., 4128h
Roux, A., 1798, 3856m
Rovira, A. D., 3820
Rowan, K. S., 1316
Rowat, R., 118a
Rowley, G. D., 3999
Roy, P.-O., 3408t
The Royal Agricultural Society of Denmark, 1680
Royal Horticultural Society, 1377, 2007, 2008, 2036, 4265
Royal Tropical Institute, Amsterdam, 1277, 1285o
Rubber Research Institute of Malaya, 2233, 2238, 4198, 4255s
Rubin, B. A., 3264
Rubin, S. S., 2441
Rubin, V., 1510h, 2558i, 3456e
Rubins, E. J., 2866c
Ruck, H. C., 1388, 1416, 2447
Ruckenbrod, H., 118b
Ruckes, H., Jr., 3784
Rudin, P. E., 2791
Rudloff, C. F., 1432
Rudolph, V. J., 3456p
Rudorf, W., 621
Ruehle, G. D., 2067, 2212, 3045, 3147
Ruge, U., 2397
Ruggieri, G., 2095, 2099, 3119q
Ruggiero, R. A., 1431
Rui, D., 1536, 2605, 3598h, 3598i
Rumbeke-Beitem Westvlaamse Proeftuin, 1380, 1381
Rundfeldt, H., 118c
Runeckles, V. C., 2908i
Rünger, W., 893, 909
Ruppel, R. F., 2805
Ruppol, E., 2924
Ruprecht, R. W., 2866p
Russell, R. C., 1655, 1664
Russo, F., 1004, 1068r, 2148q, 2148r
Russo, G., 2140
Rutter, A. E. H., 2671n
Ruyten, J. H., 2864b
Ryall, A. L., 236
Ryan, G. F., 911
Rychnovská-Soudková, M., 2941
Rygg, G. L., 1068s, 4096
Rypáček, V., 2368

S., G., 1085
S., M., 2671o
S., R. G., 2948s
Saakov, S. G., 4266
Saanichton Dominion Experimental Station, British Columbia, 975c
Sabatin, E., Ju., 1235 l
Saboor, M. A., 3858
Sabourin, L., 2029
Sacantanis, C.-B., 3115
Saccas, A. M., 3139
Sacco, S., 3064
Sachs, R. M., 4031 l
Sadamori, S., 217, 1414
Saha, A. K., 2306k
Said, M., 260y
Saint, J., 4201
St. John, J. L., 1923

St. Vincent Agricultural Department, 2306 l
Saito, M., 2566
Saitô, T., 4245
Sakamoto, M., 1711
Sakanishi, Y., 2983
Säkö, J., 3616
Salgado, M. L. M., 2195
Salisbury, F. B., 1341, 3255
Šaljneva, G. A., 3182, 3183, 3191m
Sallroth, L., 2504w
Salmon, J., 1954w
Salokangas, K., 3826
Saltman, P., 3892p
Salzer, E. H., 118d
Salzmann, R., 1285w
Samantarai, B., 967
Samarakis, B. A., 2535
Samborski, D. J., 2908p
Samish, Z., 4128i
Sammet, L. L., 2503m
Sampath, V., 3026
Samson, J. A., 1002, 2102, 2125
Samuel, L. E., 1292
Samuels, G., 1202, 1810, 2258
Samusev, F. F., 975d
Sanborn, B. G., 2866d
Sánchez A., J. L., 627, 1758
Sánchez Nieva, F., 3189
Sand, P. F., 453
Sanders, H. G., 1251
Sandhu, B. S., 3718, 3720
Sandison, S., 1235m, 3157, 4197
Sanecki, K. N., 4267
Sanford, W. W., 59, 117r
Santelmann, P. W., 517, 2681
Santini, R., Jr., 2306m, 3188, 3192d
Santos (Neto), J. R. A., 3439
Sapožkov, I. A., 2389, 2504 l
Sapožnikov, D. I., 2416a
Sárai, V., 2554
Sarawak Department of Agriculture, 1285p
Sarkar, S., 2948t
Sarmah, K. C., 1234y, 1235n, 2291
Sasser, J. N., 790, 1895, 1896
Sastry, A. S., 735, 2903
Satõ, K., 3118
Sato, T., 1954 l
Sattar, A., 4060, 4084
Satyabalan, K., 1133, 2196
Satyanarayana, M. N., 865d
Savage, E. F., 175
Savage, Z., 4036
Savary, A., 1611, 3557
Savčenko, N. A., 2814
Savulescu, A., 3509
Savur, G. R., 1235o
Sawyer, R. L., 3668, 3669
Sawyer, W. H., 813
Sax, K., 968, 3316d
Saxby, S. H., 1675e
Sayeed, P. M., 1138
Sayre, C. B., 2768
Scaramuzzi, F., 1068t, 1411, 1419, 2132, 2133, 2144, 2438, 3117
Scaramuzzi, G., 2660, 3491, 4053
Scarascia, G. T., 78
Scarascia-Venezian, M. E., 78, 3876
Ščepotjev, F. L., 324
Schad, C. 1383, 1505, 1524, 1577
Schaer, E., 3408u
Schaffer, H. G., 3580
Schaffner, G., 802v
Schander, H., 1435, 1521, 2561
Schanderl, H., 2509
Scharrer, K., 1374s
Schechtman, J., 445c
Scheer, C. D., 3243
Scheffer, T. H., 3598j
Schenk, P. K., 912
Scheuer, P. J., 827
Schexnayder, C. A., 1235p
Schilling, R. S. F., 1640o
Schindler, A. F., 4031r
Schindler, H., 2775
Schmadlak, J., 260z, 261a, 1412, 2443
Schmid, G., 2504m
Schmid, K., 747, 2871, 3865
Schmidle, A., 3530
Schmidt, G., 1751
Schmidt, M. G., 4031m
Schmidt, N. O., 4255t
Schmidt, T., 2664
Schmitt, R. J., 2964, 2986
Schnack, B., 1989, 1990
Schneider, A., 612, 1747
Schneider, G. W., 3317
Schneider, H., 2073, 2096
Schneider, I. R., 2043
Schnitzius, H. J., 4031n
Schoch, K., 2908o
Schoenemann, J. A., 2866e
Schoenfeld, R., 2948i
Schoenleber, L. G., 2943
Scholander, P. F., 326p, 3133
Schöll, W., 1409
Scholten, G., 889, 975e, 2984, 2986, 3029
Scholz, E. W., 3624
Schöniger, G., 1550, 3598k
Schoon, T. G. F., 2241, 4199
van Schoonneveldt, J. C., 1183
Schopp, R., 2806
Schrader, T., 306
Schramm, R. J., Jr., 788, 789
Schread, J. C., 879, 2962, 3023
Schrenk, W. G., 94
Schroeder, C. A., 977, 2061, 2064, 4065
Schroeder, W. T., 1685, 1739
Schubert, B. G., 3940c
Schuder, D. L., 2054d
Schüler, B. O. G., 1954x, 2922
Schultes, R. E., 1954y
Schultz, E. F., Jr., 3317, 3318
Schulz, P., 3042j
Schulze, A. E., 1908
Schumacher, M. H., 505
Schuphan, W., 3263, 4294c
Schupp, F., 2404, 3954
Schuster, M. L., 622
Schuurmans Stekhoven, J. H., 2339
Schvester, D., 418, 1599
Schwabe, W. W., 1979, 2024
Schwalen, H. C., 3315o
Schwartz, D., 773
Schweitzer, O., 118e
Schweizer, J., 1235q
Schwemmle, J., 3042k
Schwope, D., 2671p
Sciaroni, R. H., 2965, 4025
Scott, D. H., 3420
Scott, F. M., 733b, 3856n
Scott, L. B., 802s
Scott, L. E., 174
Scott, M. A., 2731
Scott, W. A., 3857
Scottish Horticultural Research Institute, 1285q, 4288
Scovell, D. L. W., 2673
Scovell, E. O., 2673
Seale, C. C., 1928
Sealy, J. R., 3042 l
Seaman, D. E., 1316
Seay, W. A., 3767
Sebastine, K. M., 2300
Šeberstov, V. V., 2919
Sedov, E. N., 171
Seegmiller, C. G., 1472, 2558x
Seeley, R. C., 836
Segall, R. H., 2900
Seidel, E., 1723, 3295
Seif, R. D., 3668, 3669
Seikel, M. K., 2054e
Seinhorst, J. W., 2671q
Sekar, K. C., 2243
Sekhar, B. C., 2244
Selhime, A. G., 4088
Semal, J., 1640p
Semenenko, I. F., 222
v. Sengbusch, R., 3427
Sequeira, L., 3125
Serafimov, S. S., 3069
Serfontein, J., 3609
Sergeev, L. I., 2466
Sergeeva, K. D., 2516
Serini, G., 260b, 3391, 3407
de Serpa Pimentel, E. M. F., 313
Serpuhovitina, K. A., 296
Serrano S., L., 722
Servant, M., 1949

Service de l'Horticulture, Rabat, 2834, 2866f
Servicio Meteorologico Nacional, 1430
Sesseler, W. M., 2193, 2948v
Sessions, A. C., 1608
Sestoft, I., 2342
Severance, C. E., 733c
Seychelles Department of Agriculture, 2340i
Seyffert, W., 975f, 975g
Seyman, W. S., 2796
Shadbolt, C. A., 2737u
Shanks, J. B., 951, 2050
Shanmugam, T. S., 536
Shantz, E. M., 55, 1342
Shapiro, S., 768
Sharif, H. M., 2864w
Sharma, R., 12
Sharma, S. L., 469, 2255
Sharp, G. G. R., 2070
Sharp, R. B., 1817
Sharpe, R. H., 1507, 1510o, 2434, 3241
Sharples, G. C., 3451
Shastri, S. K., 2306s
Shaulis, N., 3445, 3446, 3447, 3579
Shavit, A., 4059
Shaw, D. A., 2844
Shaw, F. R., 4029
Shaw, L., 1852, 2895
Shaw, M., 1322, 2908p
Shaw, M. W., 670
Shaw, R. H., 2366
Shaw, W. C., 2737r
Shay, J. R., 371
Shear, G. M., 733d
Sheard, G. F., 1354, 1358
Shedley, D. G., 2120
Sheehan, T. J., 3042m
Sheets, O., 571, 3798
Shehab, S. K., 2126
Shell Chemical Co. Ltd., 2674
Shell Company of Venezuela, 3856o, 4289
Shepard, P., 2587
Shepherd, F. W., 118f
Shepherd, J. L., 3888
Sherf, A. F., 3785
Sherman, M., 3996
Sherman, R. W., 1705
Sherwood, C. H., 2971
Shewell-Cooper, W. E., 1374t
Shewfelt, A. L., 255, 261b, 660
Shibukawa, J., 1442, 1516, 2455
Shibutani, S., 2866g
Shibuya, M., 2788
Shifriss, O., 1983
Shimokawa, M., 575
Shimokoriyama, M., 4031o
Shirley, R. L., 254
Shiroya, M., 780
Shiroya, T., 780
Shoemaker, J. S., 1246
Shoji, K., 2222
Shokri, I. S., 2054f
Shorrock, R. W., 2712, 3763
Short, G. R. A., 1954z
Shuel, R. W., 1427, 1468 l
Shurtleff, M. C., 2971
Shurtleff, M. C., Jr., 926
Shutak, V., 3401
Siciliano, S. A., 1792
Siddappa, G. S., 1953, 2864q, 3186
Sideris, C. P., 1165, 2223, 2225, 4188
Sidorovina, E. P., 3845
Sieber, J., 2022
Siegel, A., 2908q, 2908r
Siegelman, H. W., 4128j
Sierra Leone Department of Agriculture, 1285r
Siimon, A., 3205
Silber, G., 3766
Silberstein, L., 1374c
Sillans, R., 2042
Sills, V. E., 4255u
de Silva, C. A., 3192e, 4255v
Silva, G. de M., 2148d
Silver, C. N., 2009
Silvestre, M. de O., 394
Siminovitch, D., 118g
Simon, R., 3042k
Simonova, M. N., 2515
Simons, J. N., 2861
Simons, R. K., 3389
Simonsen, J. L., 2927
Simpson, K., 1969
Sims, W. L., 4046
Simura, T., 4235, 4240
Sinclair, W. B., 2068, 2069
Sinden, J. W., 638
Sineath, H. H., 3936
Singapore Botanic Gardens Department, 1285s
Singh, A., 767
Singh, D., 3939y
Singh, D. R., 1214
Singh, Harbans, 1196
Singh, Hardial, 1196
Singh, H. B., 1727, 1771
Singh, K., 2275
Singh, L. B., 3048, 3192f
Singh, M., 1196
Singh, M. P., 3192h
Singh, R. N., 3048, 3192f, 3192g
Singh, S., 4219
Singh, S. M., 3148
Singh, S. N., 962, 985
Singh, U. P., 2473
Singh, V., 557
Singletary, C. C., 3663
Sinha, K. S., 3192h
Sinnott, E. W., 593
Sirdeshmukh, K. B., 975h, 2054c
Sironval, C., 280
Sirsi, M., 3894
Sisler, E. C., 3283
Sisodia, U. S., 2215
Sisson, R. L., 3556
Sites, J. W., 1014, 3055, 3094
S'Jacob, J. C., 16
Skelding, A. D., 3316e
Skerrett, E. J., 445x
Skinner, J. C., 1662, 3645
Skinner, S. O., 3648
Skogley, C. R., 3631
Skoog, F., 772
Skoss, J. D., 2378
Skotland, C. B., 3004
Skou, S., 3119n
Škula, K., 734, 1237
Slack, D. A., 2671m
Slade, M. A., Jr., 1037
Slate, G. L., 125
Slater, C. A., 3915
Slater, W. G., 681
Slavvo, A. V., 308
Sleeth, B., 4074
Slife, F. W., 506, 3688
van Slogteren, D. H. M., 902, 3042n
Slotboom, H. J., 3598 l
Slovitsc, D., 1405
Smeets, L., 1481, 2532, 2582
Smieton, M. J., 2831
Smillie, R. M., 37, 2373
Smirnoff, W., 2117, 4128k
Smirnov, N. A., 113
Smirnov, N. S., 4069
Smit, B., 2642
Smit, W., 2558y
Smith, A. J., 2902
Smith, A. M., 2416b
Smith, C. F., 2053m
Smith, D. E., 3799
Smith, E. E., 1044
Smith, E. H., 2671r, 3549
Smith, F. F., 917, 940, 1968, 3021, 3593, 3596
Smith, F. G., 1374u, 2821
Smith, F. H., 974u
Smith, F. L., 1765
Smith, G. W., 4254t
Smith, H., 3856p
Smith, H. C., 3513
Smith, J. B., 3589
Smith, J. D., 2319, 3994
Smith, J. M., 3682, 3683
Smith, K. M., 2319
Smith, L. C., 341, 421
Smith, N. M., 1200, 2272, 4255w
Smith, O. J., 445v
Smith, P. G., 3811, 3856t
Smith, P. F., 1347, 3054, 3059
Smith, R., 3200

Smith, R. G., 3939h
Smith, R. J., 1030, 1068u, 2123, 3744, 3745, 4128 l
Smith, R. L., 2077, 3043, 3057, 3466, 4048
Smith, R. M., 2152
Smith, V. C., 3594
Smith, W. L., Jr., 3518
Smock, R. M., 238, 3399, 3598m
Snapp, O. I., 2671s
Sneider, Ju. I., 362
Snethlage, P., 2287, 4255x
Sneva, F. A., 468
Snow, M., 3316f
Snow, R., 1374v, 3316f
Snyder, J. C., 2504n
Snyder, R. J., 3818
Snyder, W. C., 3807
Snyder, W. E., 73, 74, 4028
Soboleva, I. M., 222
Société d'Horticulture d'Angers, 2418
Société de Pomologie, Québec, 4290
Society of Chemical Industry, 1456, 1624
Soenen, A., 1594, 2559, 2598, 2671t
van Soest, W., 680, 2503n
Sohonie, K., 2128
Sokoloff, B., 2115
Sokolov, S. Ja., 4268
Sokolov, V. M., 3487
Sokolova, G. P., 3737
Solignat, G., 1505
Solovjeva, M. A., 149
Solovjeva, N. V., 3623
Sols, A., 1745
Somade, B., 1161
Somers, E., 2671u, 3582
Somers, T. C., 1906
Sommer, N. F., 1576
Sommereyns, G., 3598n
Somos, A., 561, 2789
Sondheimer, E., 3521
Soper, J. R. P., 3230
Sorenson, C. J., 3559
de Sornay, A., 3162, 3164
Soroka, E. I., 2505
Soubihe, J., 4252
Soule, M. J., Jr., 3046
Souster, J., 896
South African Sugar Journal, 3160
South Australia, Botanic Garden, Adelaide, 3234r
Southern Cooperative Group, 2765
Souty, J., 1378, 2424, 3491
d'Souza, G. I., 2208
Sova, C., 1823
Sowell, G., Jr., 2783
de Soyza, D. J., 2306n
Sparks, J. E., 2393
Sparnaaij, L. D., 3151
Sparrow, A. H., 1775
Specht, A. W., 760, 1348
Speirs, M., 2765
Spence, T. B., 478
Spencer, D. M., 1633
Spencer, H., 4088
Spencer, J. L., 1154, 1996, 2214, 4086, 4178
Spensley, P. C., 2948u
Speyer, E. R., 3847
Spice, H. R., 108, 109, 2405
Spickett, R. G. W., 2945
Spiegel, P., 69, 1052
Spikes, J. D., 32, 663
Spina, P., 4120
Splinter, W. E., 1637
Spoon, W., 2193, 2948v
Sporne, K. R., 1374w
Spruit, D., 2948v
Spurling, M. B., 3408v
Spurr, A. R., 3316g
Spurr, R. A., 570
Srinivasan, M., 865d
Srivastava, D. D., 1214
Srivastava, D. P., 1206
Srivastava, G. S., 2915
Srivastava, H. C., 1233
Srivastava, P. D., 3583
Srivastava, R. C., 469
Srivastava, U. S., 3583
Stace-Smith, R., 1548, 1549, 3495
Stacey, S. V., 2683
Stadhouders, P. J., 3524
Stadler, L. B., 1163
Stadtherr, R., 3627
Staehelin, M., 290, 1573
Stafford, E. M., 2670v
Stahl, A. L., 3119j, 3187
Stahl, C., 3234s
Stahl, M., 3978
Stählin, A., 1238
Stahn, B., 3042o
Stålfelt, M. G., 44
Stambaugh, S. U., 3192i, 3192j
Stamper, E. R., 2728
Stanford Research Institute, 1248
Stanhill, G., 1374x
Stanion, R. O., 3042p
Stanković, D., 189, 213, 3382, 3479, 3491
Stapley, J. H., 3598o
Stark, P., Jr., 2556
Starkey, R. L., 3967
Starks, K. J., 3885
Starostka, R. W., 712
Stasunas, V. J., 1510p
State Board of Plant Culture, Denmark, 1288
State College of Washington, 3760
Statens Forsøgsvirksomhed i Plantekultur, 397, 445w, 551, 668, 3417, 3598p, 3598q, 3666, 3856q, 3856r
Staub, A., 1612
Staub, S., 3168
Stazione Sperimentale di Agrumicoltura e Frutticoltura, Acireale, 1283
Stearns, A. C., 2306o
Stearns, C. R., Jr., 1640n
Stearns, L. A., 2671v
Steckel, J. E., 714
Štědronský, E., 3204
Steed, J. N., 224
Steele, J. M., Jr., 1313
van Steenbergen, A., 2864c
Steffen, L., 975i, 1994, 4031p
Stehlé, H., 3163
Stein, L. H., 2902, 3864
Steinacker, M. L., 2082
Steinberg, J., 4276
Steinberg, R. A., 760
Steindl, D. R. L., 2273
Steiner, L. F., 1075, 1076
Steinmann, A., 4269
Stellwaag, F., 1249
Stender, J. A., 226, 2504o
Stephen, R. C., 1903j
Stephens, S. E., 1046
Stephens, T. S., 4127u
Sterling, C., 603
Stevens, R. F., 2671v, 2865o
Stevens, W. L., 1143
Stevenson, E. C., 687, 3815
Stevenson, V., 4031q
Steward, E., 3192k, 3646
Steward, F. C., 55, 1342, 3901
Stewart, C. W., 2306p
Stewart, I., 2085, 3060, 3062
Stewart, J. K., 685, 3809
Stewart, N., 4294a
Stewart, R. N., 4031r
Stewart, W. S., 2093
Steyer, G., 4031s
Steyn, P. A. L., 142, 1478
Steyn, W. J. A., 4054
Stiefenhofer, G., 1954k
von Stieglitz, C. R., 1695
Stier, E. F., 1832
Stiles, W., 2416c
Stinson, F. A., 802t, 1860
Stobwasser, A., 442
Stobwasser, H., 3504
Stockbridge House Experimental Horticulture Station (N.A.A.S.), 4294o
Stoddard, E. M., 3020, 3527
Stofberg, F. J., 2098
Stoïanova-Ivanova, B., 1954o
Stojanov, N., 1068v
Stojanović, D., 3507
Stolle, G., 3432
Stoller, B. B., 2811

Stolwijk, J. A. J., 3253
Stone, K. W., 3785
Storck, H., 1301
Storey, I. F., 357, 2595
Storey, W. B., 4127o, 4255h
Storkan, R. C., 1589
Storoženko, E. M., 2612
Storrie, D. L., 1473
Stoughton, R. H., 1323
Stout, A. B., 2054g
Stout, G. J., 3773, 3810
Stout, P. R., 2416d
Stoutemyer, V. T., 975j
Stover, L. H., 1510q
Stover, R. H., 2158
Stowe, B. B., 4057
Stower, J. S., 2356
Strachan, G., 598, 613, 3771
Strauss, E., 2558 l
Strebeyko, P., 2416e
Strietman, H., 1593
Stringer, A., 445x
Strømme, E., 725
Struckmeyer, B. E., 761, 762, 2731
Strucktemeyer, R. A., 3422
Strydom, E., 644, 710
Strydom, J. C., 975k
Strzemieński, K., 1374y, 2398
Stuart, N. W., 915, 961, 3981, 3987
Stubbs, L. L., 3459
van Stuivenberg, J. H. M., 179, 180, 4286
Stupin, P. J., 2068
Sturdy, M., 326f, 597, 3436, 3855i
Stute, K., 449
Su, N. R., 4187
Suarez de Castro, F., 1146
Subrahmanyan, V., 2301, 3124
Subramanian, D., 727
Subramanyam, K., 2054h
van Suchtelen, N. J., 2306q
Sudo, T., 575
Sugawara, T., 3262, 3298
Suggs, C. W., 2876
Suit, R. F., 2113, 2114, 2148s
Sumitomo, A., 2993
Summers, F. M., 1609, 3558
Sundararaj, D. D., 1838a
Surinam Department of Agriculture, Cattle-Breeding and Fishery, 2332
Susini, E., 2048, 3958
Sutcliffe, J. F., 1779
Sutton, W. S., 2866h
Suzuki, M., 1728
Swain, T., 2053b, 3042g
Swaine, D. J., 1247
Swaine, G., 3185
Swales, J. E., 1556, 2599
Swank, G., Jr., 1759
Swann, I., 118g
Swarbrick, T., 1474
Swart-Füchtbauer, H., 1630
Swartwout, H. G., 2028
Sweet, D. V., 1408, 3278
Sweet, H. A., 512
Sweet, R. D., 501, 511
Swets, W. A., 48
Swezey, A. W., 1673
Swinzow, H., 1453, 3393, 3856e
Swirski, E., 4089
Sykes, S. M., 1838b
Sylvain, P. G., 3192 l
Sylvester, E. S., 733e
Symon, D. E., 2038
Symons-Jeune, B. H. B., 1250
Synge, P. M., 4265
Szaák, M., 2527
Szent-Ivany, J. J. H., 1955a
Szentiványi, P., 3456q
Szkolnik, M., 3521

Tabayoyong, F. T., 2726, 4212, 4213, 4220
Taboada, O., 1345
Taboada, V. L. E., 4067
Tafuro, A. J., 490, 2686
Takahashi, D., 2264
Takashima, S., 592
Takeshita, S., 994
Talati, R. P., 1350
Talbott, G., 1678
Talboys, P. W., 2931
Taleĭsnik, E. D., 150, 3349
Tamburini, R., 2628
Tamburo, S. E., 3142
Tanada, T., 92, 95
Tanada, Y., 1715
Tanaka, S., 432, 1034, 1035
Tandon, J. N., 1205
Tandon, R. N., 2215
Tandon, S. L., 641
Taneda, T., 900
Tang, R. C-W., 634, 2808
Tanganyika, Colonial Insecticide Research, Arusha, 1656
Tanganyika Department of Agriculture, 3230
Tanganyika, Government Chemist, 3234t
Tanganyika Sisal Growers' Association, 2930
Tanimoto, T., 2264
Tanner, C. C., 118h
Taper, C. D., 163
Tarjan, A. C., 1580
Tarutani, T., 694
Taschenberg, E. F., 2857, 3579
Tasmanian Department of Agriculture, Plant Pathology Division, 350
Tašmatov, L. T., 3119r
Tatchell, A. R., 844, 1933, 1954m, 3913
Tatebe, T., 2764
Tatsuno, Y., 199
Taubert, A., 1128
Tavernier, I., 2302
Taylor, A., 1640q
Taylor, C. A., 3899, 3900
Taylor, C. F., 2600
Taylor, D., 286
Taylor, D. J., 2188
Taylor, E. A., 732m, 940, 3021
Taylor, G. S., 3681
Taylor, J., 368, 1300
Taylor, O. C., 988
Taylorson, R., 3640
Tea Research Institute of Ceylon, 1216
Tea Research Institute of East Africa, 1217
Teaotia, S. S., 3414
Teas, H., 4200
Tejwani, K. G., 2877
Templeton, J. W., 75
Terpó, A., 457
Terra, G. J. A., 83
Tertyčnaja, L. A., 2743
Teskey, B. J. E., 1246
Testa, J., 3107
Teubner, F. G., 2474, 2504p, 3822
Teuscher, H., 3022, 4027
Tew, R. P., 388, 2621, 2646
Tewfik, M., 3468
Texte, H., 5
Thaine, R., 118i
Thaler, O., 256
Thandavarayan, K., 865u
Thayer, C. L., 2952
Théau, A., 2030
Theis, T., 812
Thellot, B., 2690
Thermes, R., 2761
Theron, C. J., 2536
Thiegs, B. J., 518
Thiele, I., 148, 3330
Thiem, H., 441, 3491
Thieret, J. W., 3939x
Thimann, K. V., 3285, 3315y, 4057
Thistle, A., 2150, 3192m
Thoday, J. M., 1746
Thomas, C. A., 733f, 2946
Thomas, D. C., 2415k
Thomas, D. G., 3206
Thomas, M. D., 1321
Thomas, W. D. E., 1632
Thome, H. J., 436
Thompson, A. E., 3812
Thompson, B. D., 733g, 1783, 2131
Thompson, B. G., 2933
Thompson, F. B., 3610
Thompson, H. A., 4222

Thompson, J. T., 2683, 2701
Thompson, L. A., 2601
Thompson, R. C., 2866i
Thompson, W. L., 2118, 3088
Thomson, R., 3867
Thorne, D. W., 3259
Thorne, G. W., Jr., 2895
Thorold, C. A., 1235r, 2186, 4143
Thorpe, I. G., 523o
Thorsrud, J., 3394
Thresh, J. M., 2184
Thresh, R., 3315b
Thurston, R., 3885
Thyssen, P., 321
Ticknor, R. L., 475
Tihonov, N. N., 261c
Tilford, P. E., 3234p
Till, J. F., 2709
Timmons, F. L., 523m, 1651, 2688, 2737m
Tims, E. C., 659
Ting, S. V., 3119s
Tinga, J. H., 3960
Tinsley, I. J., 1838b
Tippins, H. H., 2652
Tisdale, W. B., 1759
Tissot, A. N., 1893
Tixier, P., 1401, 3192n
Tobacco Research Board of Rhodesia and Nyasaland, 1880
Tobler, F., 1927
Todd, F. A., 1892, 3883
Todd, G. W., 1008, 3246, 3247
Todd, J. M., 1117
Todd, J. R., 2296
Todorović, D., 1374z
du Toit, J. L., 4255y
Tolhurst, J. A. H., 1224, 1226
Toll Jubés, J., 984, 4067
Tollenaar, D., 1235s
Tolmačeva, A. S., 261c
Tomanek, J., 2450
Tomar, M. S., 673
Tombesi, L., 770, 771, 1865, 2881
Tometorp, G., 2865m
Tomkins, J., 3446, 3447
Tomova, M., 817
Toniolo, L., 3753
Toohey, C. L., 2268
Tookey, H. L., 2375
Toole, E. H., 1324, 3296
Toole, E. R., 2034
Toorenaar, G., 1531
Toovey, F. W., 3150
Toponi, M., 2385
Torfason, W. E., 3771
Torii, H., 4241
Torrey, J. G., 3316h
Torrie, J. H., 3757
Toth, S. J., 2960
Towers, G. H. N., 916
Toxopeus, H. J., 983
Toyoda, T., 2011
Tramier, R., 2866j
Trenk, F. B., 2416f
Tresadern, F. H., 865q
Trevett, M. F., 1470, 2512, 3423, 3619, 3660, 3665
Trevisan, M., 192
Tricaud, P., 1510r
Trickett, E. S., 1368
Trim, L. G., 733h
Trinidad and Tobago, Director of Agriculture, 1278
Trinks, U., 1723
Trioreau, P., 2504q
Tripathi, R. D., 2306r, 4179
Trkula, D., 2908f
Trojer, H., 1145
Troop, K. D., 255
Trotter, W. K., 9751
Trought, T. E. T., 798
Troy, D. J., 118j
Truel, P., 1510d
Truscott, J. H. L., 2486, 2558o, 2776, 2824
Trusevič, G. V., 3344
Trzcinski, T., 208
Tsalpatouros, A., 3127
Tsao, G., 3773
Tseng, P. M., 2252
Tsitsin, N. V., 601
Tso, T. C., 778
Tsou, T. M., 2737k, 2737l
Tsuyama, H., 1711
Tuason, A. M., 865n
Tubbs, F. R., 3
Tuckett, J. R., 2937
Tukey, H. B., 118k, 1417, 3278, 3800
Tukey, L. D., 445y
Tumanov, I. I., 1434, 4068, 4069
Tupicyn, D. I., 3487
Turck, G., 3316i
Turcot, C., 1840
Turian, G., 1573
Turica, A., 407
Turkovic, I., 2924
Turković, Z., 326q, 2544
Turner, J. S., 1316
Turnipseed, G. F., 1602
Turnquist, O. C., 2680
Turrell, F. M., 2124
Turrialba, Interamerican Institute of Agricultural Sciences, 4279
Tveit, M., 328
Twinn, C. R., 3598r
Twitchin, J. F., 2218
Twomey, J. A., 2603, 2671w
Tyagi, O. P., 1845
Tyler, V. E., Jr., 2948w
Tyson, J., 2017
Tysser, H. F., 2333
Tyszkiewicz, E., 2364

Uehara, M., 540, 1390, 4125
Ueno, K., 975m
Uganda Protectorate Department of Agriculture, 4291
Uitterlinden, L., 2648
Ullah, A., 3408w
Ullah, H., 1235t, 2074, 2213
Ullrich, D. E., 406
Ullrich, J., 733i, 1795
Ulrich, R., 228, 245, 256, 2302, 2504r, 3408x
UNESCO *see* United
Unger, K., 1747
Union of South Africa, Department of Agriculture, Division of Horticulture, 527
United Nations Educational, Scientific and Cultural Organization (UNESCO) 7
United Planters' Association of Southern India, 3178, 4233
Unruh, M., 216
Unterstenhöfer, G., 3598s
Uota, M., 236, 246
Upshall, W. H., 2460, 2504s
Urchs, H., 2624
Ure, J. S., 3908
Uriu, K., 4119
Urs, M. K., 3192o
Uschdraweit, H. A., 580, 733j, 3738
U.S. Department of Agriculture, 1286, 1449, 2334, 3231, 3232, 3598t, 3598u, 3598v
U.S. Department of Agriculture, Foreign Agricultural Service, 865v, 979, 1090, 1142, 1235u, 2148t
U.S. Department of Agriculture, Tobacco Division, 2867

Vagt, W., 445t
Vaheeduddin, S., 2306s
Vaidyanathan, C. S., 29, 1954u
Valcarce, A. C., 1736
Valenta, M., 3716
Valentin, H., 3738
Valenzuela V., G. O., 4173
Vallaeys, G., 3192p
Vallance, L. G., 1201, 3645, 4255z, 4256a
Valls, M., 3456r
Valsan, A. P., 1944
Valsechi, O., 2221
Vanderbrook, C., 871, 3951
Van Etten, C. H., 3896
Van Laan, G. J., 3982

Van Middelem, C. H., 732v, 733g, 1701
Vansell, G. H., 1429
Vanselow, A. P., 1003
Vanwetswinkel, G., 1594
Varela Martinez, R., 2148u, 2306t
Vargas, J., 4146
Vargas S., R., 627, 1758
Varma, R. P., 3843
Varner, J. E., 1311, 1318
Varney, E. H., 3526
Varney, H. R., 1281
Vasconcellos, F. T. C., 1171
Vasseur, R., 418
Vaughan, C., 1903k
Vaughan, E. K., 3531
Vaughn, J. R., 3598w
de Vaus, N. K., 3856s
Vayssière, P., 4257
Vedantam, K., 3192q
Vedel, H., 2054i
van der Veen, R., 445n
Veenenbos, J. A. J., 2807
Veerabangsa, M. T., 2242
Vega, J., 1551, 3440
Veihmeyer, F. J., 314, 1448, 2352
Velatta, M., 1353
Veneroso, A., 1640r
Venezia, M., 2148v
Venjjaminov, A. N., 126
Venkataraman, K. V., 2877
Venkataraman, R., 4255p
Venkataramani, K. S., 3693k, 4234
Venter, P. J., 2536
Ventura, M. M., 1955b
Vergani, A. R., 2641
Vergera, C., 2614
Vergnes, A., 1572, 2607, 2613
Verkerk, K., 3828
Verlot, J. B., 5, 3303
Verona, O., 1984
Verzele, M., 843, 1937
Veyret, Y., 2911
Vibstad, A., 2866a
Vickery, H. B., 1874, 2887
Vickery, R. K., Jr., 2054j
Vidal, J.-P., 304, 1486, 2547
Vieitez, E., 317, 318
Viennot-Bourgin, G., 2975
Viêtnam, Centre National de Recherches Scientifiques et Techniques, 1284
Vilardebo, A., 3123
Viljčinskiĭ, N. M., 3177
de Villiers, G. D. B., 3489
Vince, D., 1362, 1805
Vincent, S., 3042q
Vineland Horticultural Experiment Station, 3228
Vines, H. M., 3587
Vinot, M., 885
Virelizier, P., 855
Virgin, H. I., 1375a
Vishniac, W., 1375b
Višnevskiĭ, S. I., 693
Visser, T., 187, 1422, 1423, 1425, 3337
Vitoveckiĭ, M. M., 2874
Vittorio, P. V., 2882
Vittum, M. T., 1364
Vlamis, J., 3838
v. d. Vliet, M., 1707
Vlitos, A. J., 768, 2889, 3868
Voblikova, T. V., 3833
Voegeli, L. J., 1793
Vogel, F., 523p
Vogel, G., 1723, 3295
de Vogel, P., 4022
Vogel, R., 123
Vogel, W., 1612
Volcani, R., 4128m
Voluznev, A. G., 326r
VonAbrams, G. J., 3019
Vörös, J., 2659
de Vos, L., 4153
Voskresenskaja, N. P., 2369
Voth, V., 339, 2506, 2530
van de Vrie, M., 1600
Vrzalová, J., 1904

W., J. B., 2948s
Wacker, G. B., 2110
Wäckers, R. W., 3577
Wada, E., 3891
Wade, G. C., 1757, 3316j
Wadleigh, C. H., 661
Wadman, P. E., 4254s
Wagenknecht, A. C., 2503t
Waggoner, P. E., 2866k
Wagner, M., 665
Wagner, V. J., 1903 l
Wahhab, A., 1155, 2416g
Wahlberg, H. E., 4128n
Wain, R. L., 51, 836, 1633
Waite, B. H., 3126
Waite Agricultural Research Institute, 1285t
Waites, R. E., 732v, 1701
Wakisaka, I., 3490
Walkden, G. B., 2340j
Walker, A. L., 3940a
Walker, C., 2699
Walker, C. F., 2340k
Walker, D. A., 2948b
Walker, D. R., 214, 3384
Walker, E. K., 754
Walker, G. W. R., 2422, 3011
Walker, H. M., 715
Walker, J., 898, 4021
Walker, J. C., 15, 723, 733k
Walker, R. B., 715
Walkof, C., 533, 697
Wall, M. E., 3940b
Wallace, A., 90, 91, 989, 995, 2057, 2077, 3043, 3057, 3280, 3282, 4048
Wallace, G. B., 1231
Wallace, J. G., 1510s
Wallace, J. M., 2097, 4073, 4079
Wallace, L. E., 3560
Wallace, M. M., 1231
Wallace, T., 2504t, 2504u
Wallen, V. R., 626, 2750
Wallin, D. E., 1729
Walter, H., 1375c
Walter, J. M., 1837o
Walters, H. J., 3598w
Walters, M. C., 118i
Wander, I. W., 2083, 3055, 3078, 4128o
Wang, C. C., 1197
Wanscher, J. H., 9
van der Want, J. P. H., 1755
Ward, G. M., 250, 251, 3473
Ward, J. B., 3119p
Ward, K. M., 1482
Warden, R. L., 3690
Ware, L. M., 539
Wareing, P. F., 3254
Warid, W. A., 2866 l
Waring, N. D., 1370
Warington, K., 1752
Wark, D. C., 745, 783
Warley, T. K., 3305, 4292
Warner, R. M., 1385, 1443, 1616,1625,1915,3332,3458
Warnock, S. J., 3752
Warren, F. L., 1954x, 2922
Warren, G. F., 488, 2713, 3657, 3676
Wasscher, J., 936, 946, 2023, 2984
Wassenaar, L. M., 2582
Wassink, E. C., 3253
Watson, C. C., 3591
Watson, D. P., 2954
Watson, V. K., 1923
Watson, W. W., 2717
Watt, A. J., Jr., 2306u
Watt, A. S., 1642
Wattle Research Institute, Pietermaritzburg, 1951
Waugh, F. W., 1302
Weathers, L. G., 1009
Weaver, R. J., 300, 303, 3450
Webb, A. J., 732o, 2027
Webb, D. v. V., 3932
Webb, F. W., 1357
Webb, L. J., 814
Webb, R. E., 1838c
Weber, F., 2968
Webster, B. N., 1229, 1230, 3191y
Webster, G. C., 1310, 1311, 1318, 1375d
Webster, G. R., 3964

Webster, J. E., 3924
Webster, W. J., 294, 295, 1497
Wedding, R. T., 1016, 2794
Wedin, W. F., 761, 762
Weger, N., 291
Weibull, G., 538, 2866m
Weidemann, C., 1853, 1855, 1873, 3866, 3892c
Weidhaas, J. A., Jr., 4029
Weihing, J. L., 1888
Weinberger, J. H., 2584
Weinstein, L. H., 4007
Weintraub, M., 1545
Weiser, W., 2866n
Weiss, K., 169
Welch, C. D., 1852
Welch, J. E., 3856t
Welkerling, E. M. L., 173
Wellensiek, S. J., 975n
Wellesbourne, National Vegetable Research Station, 4293
Wells, J. C., 3002
Wells, J. S., 2031, 4270
Welsh, M. F., 1544
Wene, G. P., 733a, 1828, 3846
Went, F. W., 3824
Wenzl, H., 444
Werckmeister, P., 975o, 1999, 4031t
Werner, A. E. A., 865o
Wertheimer, —., 3101
Wesley, R., 3314
Wesselmann, R. A., 4256b
West, C., 2504v
West, R. E., 2811
West, S. H., 3767
West African Cocoa Research Institute (W.A.C.R.I.), 2163
West African Institute for Oil Palm Research (W.A.I.F.O.R.), 3149
West Bengal Directorate of Agriculture, 1279
West of Scotland Agricultural College, 1280
West Virginia Agricultural Experiment Station, 1281
Wester, R. E., 2866s
Western, N., 2504w
Westgate, P. J., 1693, 1694, 2745, 3032
Westmoreland, W. G., 1675f
Wezenberg, H. J., 876, 2986, 3029, 3033, 3036
Wharton, A. L., 2185
Wharton, D. C., 2864i
Whatley, B. T., 445z
Wheatley, G. A., 2772
Whellan, J. A., 1902
Whisler, J. E., 3341
Whistler, R. L., 4147
Whitaker, T. W., 3855j
Whitcomb, W. D., 3547
Whitcomb, W. H., 3892q
White, D. G., 445z, 865w
White, D. J. B., 1741
White, F. H., 753
White, H. E., 4003
White, P. R., 1285u
Whitehead, C., 1101
Whitehead, S. B., 3207
Whiteman, T. M., 1460
Whitner, B. F., Jr., 1694
Whitney, N. J., 3791
Whittingham, C. P., 1320, 2315
Wiant, D. E., 1345
Wickens, R., 1235v, 2174, 2185
Wickson, M., 2486
Wickson, M. E., 916
Wickstrom, G. A., 3279
Widmer, R. E., 2972
Widmoyer, F. B., 2954
Wiebe, J., 2350
Wiebosch, W. A., 596
Wiehe, P. O., 3161
Wieland, P. A. T., 995
Wiersum, L. K., 1176, 1235w, 2232, 2239, 4269
Wiggans, S. C., 2366
Wiggins, L. F., 3192r, 4232
Wight, W., 3180, 4256c
Wightman, F., 51
Wijbrans, J. R., 2155
Wijewardene, R., 4256d
van Wijk, W. R., 21
Wijshoff, J. W., 2504x
Wikesjö, K., 326s
Wilbur, W. D., 1043
Wilcox, A. N., 3456i
Wilcox, E. C., 3321
Wilcox, J., 1596, 1799, 3542
Wilcox, L. V., 3316k
Wildbolz, T., 1592
Wildman, S. G., 2908q, 2908r
Wildman, W. C., 865x
Wildon, C. E., 1809
Wilhelm, S., 392, 2148y, 3018, 3532
Wilhelminadorp, Proefstation Fruitteelt Volle Grond, 1379, 1583
Wilkins, A. H., 399, 3540
Wilkinson, J., 3856u
Wiłkojć, A., 2394
Wilks, J. M., 1544
Willaman, J. J., 3940c
Willard, C. J., 517, 523q, 2681
Willet, J. R., 1151
Williams, C. F., 1578
Williams, D., 2565
Williams, E. L., 3545
Williams, H. E., 2671x
Williams, H. R., 2451
Williams, I. H., 1475, 2520
Williams, J. H., 4256e
Williams, K., 2599
Williams, L. E., 3739
Williams, M. C., 3688
Williams, P. H., 3842, 3856v
Williams, R. F., 1304, 4043
Williams, R. H., 2689
Williams, R. R., 141, 170, 177
Williams, T., 2280
Williams, W. T., 1742, 2825
Williamson, C. E., 2974
Williamson, J., 1389
Willison, R. S., 1545, 3475, 3553
Willits, C. O., 1954t
Wills, E. D., 3940d
Wills, J. M., 4256f
Willson, A. E., 3052
Wilner, J., 3316 l, 4021
Wilson, C. E., Jr., 520
Wilson, D. J., 389
Wilson, D. W., 204
Wilson, E. E., 2616, 2657, 3534
Wilson, G. B., 2737k, 2737 l
Wilson, J., 2306v
Wilson, J. D., 1720, 2756, 2827, 3856w
Wilson, J. F., 2931
Wilson, J. Y., 4031u
Wilson, N. S., 1547
Wilson, R. W., 2869, 3887
Wilson-Jones, K., 3613
Wiltshire, G. H., 3764, 3765
Windham, S. L., 2866o, 3704
Winkler, A. J., 3455
Winocour, E., 4082
Winslow, M. M., 2063
Winsor, G. W., 3840
Winstead, N. N., 2830, 3002, 3004
Winston, J. R., 2148w
Winter, E. J., 1374x
Winter, H. F., 2585
Winter, J. C., 1718
Winters, H. F., 866
Wise, W. S., 4226, 4232
Wishart, J., 1251
Wishart, R. L., 341, 3388, 3598x
Wismer, C. A., 2305g
Wisnieski, A. J., 3625
de Witt, K. W., 1127
Witte, K., 86, 1252, 2873
Wittwer, S. H., 679, 1790, 3797, 3822
Wöber, O., 2904
Wohlmuth, N., 2485
Wolcott, G. N., 4131
Wolde, W., 2747
Wolf, E. A., 1665, 1838d, 2708, 2716, 2719, 2866p, 3671, 3672
Wolf, F. A., 775, 786, 787, 802u, 1847
Wolf, F. T., 775, 786, 787, 788, 789, 802u

Wolfe, H. H., 498, 502, 3693 l
Wolfe, H. R., 1640s
Wolfe, H. S., 998
Wolfe, J., 118 l
Wolfenbarger, D. O., 2866q
Wolff, R., 865k
Woltz, S. S., 910, 2002, 2994
Woltz, W. G., 1854
Wong, L. C-K., 1954e
Wood, C. A., 270, 2558w
Wood, D. J., 4255q
Wood, H. E., 3693m
Wood, M. C., 3939d
Wood, P. D., 3408y
Wood, R. K. S., 328
Woodbridge, C. G., 334, 2502
Woodcock, D., 445x, 2656
Woodhead, C. E., 2504y
Woodruff, N. P., 2345
Woods, J. J., 3964
Woodside, A. M., 2671y
Woodville, H. C., 920, 2054k
Woodward, F. N., 865f
Woodward, G. O., 3316m, 3316n
Woog, R. G., 1068w
Woolley, D. W., 802v
Work, P., 1253
Worley, D. P., 470
Wort, D. J., 3687
Worthy, W. L., 1023
Wright, D. N., 652, 3855v
Wright, D. W., 3856x
Wright, J. D., 2085
Wright, J. M., 594
Wright, R. C., 1455, 1460
Wright, R. C. M., 1254
Wright, S. T. C., 3415
Wright, W. H., 2672
Wróblewska, Z., 716
Wurgler, W., 290, 1439, 1491
Wye College, Department of Economics, 121
Wylie, A. P., 4258
Wynd, F. L., 1809

Xinaris, A., 3856y

Yagi, T., 991, 992, 1025
Yakuwa, T., 2866r
Yamada, E., 537
Yamada, S., 378
Yamaguchi, M., 3856z
Yamasaki, K., 589
Yamazaki, T., 2566
Yanadori, S., 3067
Yankovitch, L., 3110
Yaqub, M., 3939o
Yarwood, C. E., 1539
Yasuda, I., 1963, 2996
Yeager, A. F., 261d, 3408z
Yeates, J. S., 2051, 2703
Yemm, E. W., 3385
Yoder, J. T., Jr., 117k
Yoe, J. H., 2415 l
Yoffe, I., 4080, 4081
Yokomizo, T., 279
Yokoyama, N., 2996
Yoneyama, K., 1018
Yoshida, I., 1015
Yoshida, K., 3464
Yossifovitch, M., 3491
Young, A. J. A., 3042r
Young, H. C., 2585
Young, H. E., 1188, 2235, 2236, 2306w
Young, H. Y., 4188
Young, P. A., 1803
Young, R., 3047
Young, R. E., 4099
Young, R. S., 1306
Young, T. W., 2067, 2148x, 3045, 3144, 4114
Yu, H., 3939r
Yukawa, I., 992
Yust, H. R., 2667
Yusuf, N. D., 4202, 4207, 4214, 4215, 4216, 4223

Zabala, S., 326t, 1215
Zahara, M. B., 3811
Zahrjapina, E. A., 2743
Zalewska, Z., 3034
Zamith, A. P. L., 2203
Zampighi, G., 1571
Zanardi, D., 1597, 2782
van Zanten, E., 2828
Zanzibar Department of Agriculture, 1285v
Zatulovskiĭ, B. G., 3897
Zatykó, I., 3342
Zatykó, S., 2435
Zaumeyer, W. J., 623, 2855, 2866s
Zeck, E. H., 426, 733 l, 950, 1615, 1640t
Zedler, R. J., 514, 3680
Zeehuisen, J. J., 4242
Zelensky, V., 2306x
Zelitch, I., 1903m
Zeller, O., 183
Zemljanuhin, A. A., 2866t
Zentmyer, G. A., 2064, 2065, 2148y, 3044
de Zeeuw, D., 559, 1709, 2415f
de Zeeuw, D. J., 2798
Zick, W. H., 3604, 3605
Zieger, F., 3955
Ziegler, L. W., 2090
Zielinski, Q. B., 4031v
Zimmerman, P. W., 59, 117r, 1534, 2347, 3272
Zimmermann, J., 2545
Zimmermann, M., 969, 973
Zimmermann, M. H., 27
Zink, F. W., 678, 1791, 3804
Zito, F., 4120
Zocchi, R., 3554
Žolkevič, V. N., 3250
Zolotovič, G., 1924, 2925, 2926
Zopf, P. E., Jr., 1749, 2792
Zschaeck, H., 3316o
Zubov, M. F., 2611
Zuchkov, N. R., 3485
van Zuilen, E. J., 3181
Zukel, J. W., 3273
Zukerman, I., 4105
Zürich-Oerlikon, Agricultural Research Station, 1285w
Zusman, P., 4052
van der Zwaard, P., 3024, 3029
van der Zweep, W., 492, 523r
Zwicky, P., 2539
Zwintzscher, M., 131, 382, 1529

Aalsmeer Res. Stat. Floric., A.R., 2950
Abacá (*Musa textilis*)—*see* Manila hemp
Abbreviations, world list of, 2309
Abies balsamea, 824
Abscission—*see also* Flower drop, Fruit drop, Growth-substances *and* Leaf—a review, 1335
Abstracting service in Holland, 6
Abutilon spp., variegated, 947
Acacia—see also Wattle—
dealbata, 1963
karroo, 3609
spp., growing in Italy, 3042a
Acalymma trivittata, 1735
Acalymma vittata, 3747
Acanthopsyche junodi, 3932
Acanthoscelides obtectus, 1764, 2805
Acaricides—*see also* Insecticides *and* Sprays—
additives for, 4005
azobenzene, 4005
butylphenoxyisopropyl chloroethyl sulphite (Aramite, CES, etc.), 2627, 4005
chlorbenside (Chlorocide, Chlorparacide, Elimite, Mitox, etc.), 399, 400, 2621, 2622, 3540, 3541
chlorinated phenyl benzene sulphonates (CPBS, CPCBS, DCPBS, Ovotran, etc.), 400, 2621
demeton (Systox), 2627, 2933
diazinon, 3148, 4089
dimefox, 3912
endrin, 3959
ethyl 4,4-dichlorobenzilate (Chlorobenzilate), 437, 1017, 2109-2111, 3148, 4005
Kelthane, 2620
Metasystox, 1629, 2624
mite resistance to, 402
oils, 3519
parathion, methyl parathion and related esters, 3519
R.6199, 2623
residues, 3591
reviews on, 3598f
schradan, 2277, 2633
selenium, 405
sulphur and sulphur compounds, 4055, 4089
systemic, 445e, 2626, 3457
Tedion, 403, 404, 445n
trichlormethyl, 2-4,4′-dichlorobenzhydrol (F.W.293), 401, 3544, 3546
various, 398, 403, 1018-1020, 1513, 1583, 1585, 1590, 2237, 2625-2628, 2646, 3088, 3222, 3457, 3542, 3543, 3575, 3963, 4247
Acer—
rubrum, 945, 3022
saccharum—see Sugar-maple
spp.—
decay in, methods of determining, 2668
Acer—spp. (*continued*)—
frost hardiness, 3041k
root growth, 4014, 4015
rootstocks, 3022
Aceria—
litchii, 2130
sheldoni, 1017, 2107, 2109
tulipae, 1777
Acetate metabolism in plants, 1312
Acetylene, flowering induced by, 1166-1168, 2227, 4129
Acetylene, treatment for ripening fruits, 3128
Achatina fulica, 2153
Achras sapota, 4255p
Achylodes papinianus minor, 4086
Acids, organic—*see also individual acids, and crops under* composition—
determination, 802r, 2886, 2908k, 3892o, 4256e
metabolism, 916, 1311, 1375d, 2368, 2385, 3315y, 3764, 3855a
in plants, 29, 30, 259, 260f, 545, 554, 616, 1088, 1832, 1865, 1866, 2415v, 3192d, 3263, 3402, 3856f
radioactive, 1375d
Aconitum spp., as insecticidal plants, 3916
Acrocomia totai, 853, 3925
Acropyga spp., harmful ants, 4173
Acrostalagmus aphidum, 4131
Acrothecium lanatum, 1013
Actinidia spp., growing in various countries, 125, 2505
Actinonema rosae, 2739
Acyrthosiphon pisum, 620, 629
Adansonia digitata, 2299
Adelaide bot. Gdn, A.R., 3234r
Admont, Bundesanst. alpine Landwirtsch., A.R., 524
Aechmea fasciata, 884, 2022
Aechmea sp., light responses, 4282
Aeginetia indica, 1210
Aegle marmelos, 4127q
Aeneolamia varia var. *saccharina*, 4230
Aerosols—*see* Fungicides *and* Insecticides
Aesculus sp., growth substance from endosperm, 55
Aesiotes leucurus, 950
Africa—
East—*see* East *and separate countries*
French West and Equatorial—*see* French
North—*see also separate countries*—crops, 2504q
South—*see* South
West—*see* West *and separate countries*
Agaricus—see also Mushroom—spp., description of, 2865a
Agathaea coelestis, 2967

Agave—
americana, 828, 2378
fourcroydes, 828, 4280
sisalana—*see* Sisal
spp., growing in Brazil, 2948a
spp., as medicinal plants, 1911
vera cruz, 865d
Agricultural—
advisory services in Great Britain, 118a
biochemistry, a book on, 1244
documentation centre, Wageningen, 6
Engineering Research, Journal of, 2336
research, in Canada, 2320
statistics—*see also* Trade—
in Australia, 8
in British Columbia, 3234c
in Germany, 1294
graphic analysis of, 1302
Agriculture—
in Ceylon, 2306b, 2306n
in France, 1954r
in Haiti, 1240
in Israel, 1292
in St. Helena, 1295
tropical—*see* Tropical
in the West Indies, 3191o
in Yugoslavia, 1296
Agrilus sinuatus, 416
Agriotes spp.—*see* Wireworms
Agrobacterium gypsophilae, 1984
Agrobacterium tumefaciens—*see* Crown gall
Agropyron repens, 452, 497, 517, 1643, 2417, 2680, 2681, 2690, 3604, 3605, 3617, 3659
Agrostis alba, 2017
Agrostis spp., unspecified, 1643
Agrotis flammetra, 4229
Agrotis spp., unspecified, 3557
Air—
conditioning and purification—*see* Storage buildings
layering—*see* Marcotting
movement in leaves, 1332
pollution and plant injury—*see also under* Fluorine—25, 26, 118j, 662, 1007, 1008, 1248, 1534, 1535, 1640r, 2092, 2347, 2348, 2961, 3078, 3083, 3245-3248, 3710, 4128o
Aircraft, agricultural uses of, 2415i, 3315w
Aircraft, application of chemicals, 2246, 2306u, 2513, 3610, 3932, 4255z
Alberta—*see also under* Canada—Dep. Agric., A.R., 1285a
Albinism in various plants, 2078
Albizzia julibrissin, 2034
Albugo ipomoeae panduranae, 1986
Alcohol in *Lithospermum officinale*, 1954f
Aleurites—
cordata, 1067
fordii—*see* Tung
montana—*see* Tung
triloba, 1917
Aleurocanthus spiniferus, 3092
Aleurocanthus woglumi, 2103, 4127t
Algae, culture, large-scale, 861, 862
Algae, marine, composition, 862
Algeria—*see also* Africa, North—
Cons. Rech. agron., A.R., 3208
crops, various, 3939p
crops, vegetables, 2833, 3208
ornamental trees and shrubs, 2030, 2040
Alginic acid in seaweeds, 1944
Alisma plantago-aquatica, 3615
Alkaloids—*see also* Nicotine *and certain other alkaloids and alkaloid-yielding plants*—
determination, 2885, 3895, 3896, 3939u
plant—*see also* Medicinal plants, Cinchona *and* Tobacco *under* composition, *and species of Agave, Alstonia, Atropa, Dioscorea, Nerina, Nigella, Ocotea, Papaver, Piptadenia, Rauwolfia, Strychnos, Tabernanthe and Veratrum*—
biosynthesis of, 2913, 3874, 3875
contents, factors affecting, 3900
from crops, 1939
extraction, 2914
physiology of, a review, 1319
surveys of, 814, 815, 865e, 3940c
Alkmaar Exp. Stat. Veg. Growing in the Open, Holland, A.R., 3699
Allelopathy, 3199
Allicin determination, 732q
Allium—*see also* Onion, *etc.*)—
canadense, 1837w
fistulosum, 2384
spp., as weeds and their control, 451
Almond—
climate, spring frost protection and injury, 346
composition, kernel, 2554
diseases and disorders, 315, 385, 2657, 2660
growing, in Australasia, 326i, 3456d
nutrition, minor elements, 316, 3465
×peach hybrid, 2433
pests, insect, 3558
physiology, water relations, 314
pollination, 173, 3354
propagation, 3340
root growth, 314
rootstocks, 315, 316, 4022
seed embryo culture, 146
seed germination, 146
varieties, 1393, 2554
Alnus cordata, 4012
Alpine plants, *Ranunculus* spp., 2053g
Alpine plants, of Yugoslavia, 867
Alstonia constricta, 1906
Alstonia spp., latex, 851
Alternaria—
citri, 1034, 1035
dianthi, 1975
kikuchiana, 378
longipes, 757, 782
passiflorae, 1058
solani, 724, 1633, 2853, 3839
spp., unspecified, 1565, 2829, 3533
tenuis, 1883
Althaea officinalis, 3893

Altimeters for tree measurement, 3314
Altitude, plant development affected by, 3162, 3191q
Aluminium—
  foil for wound healing, 3227
  nutrition of plants, 954, 2047, 3806, 4019
  toxicity, 666
Amaranthus—
  gangeticus, 29
  spp., seed dormancy, 536
  spp., weed, and their control, 3657, 3661
Amaryllis spp., breeding, 2053 l
Amateur Gardening Annual, 3216
Amateur Gardening Diary, 4277
Ambrosia spp., control, 3618, 3621, 3661
Amelanchier—
  alnifolia, 125, 2422
  canadensis, 4018
  spp.—
    as fruit and ornamental plants, 124
    as rootstocks for cotoneaster, 4018
    as virus indicators, 2576
America—*see also separate countries*—tropical, pomology in, 1071
Ametastegia glabrata, 425
Ametastegia spp., unspecified, 3597b
Amino acids—*see under* Acids, organic
Amitus hesperidum, 3092
Ammonia—*see also* Nitrogen—injuries to plants, 1349
Amorbia essigana, 978
Ampeloglypter ater, 3547
Amphorophora crataegi, 2962
Amphorophora rubi, 1548, 1549, 3495
Amygdalin content of plants, 3473
Anabasine biosynthesis, 3874, 3875
Anacardaceous plants, toxins, chemistry of, 523f
Anacharis canadensis, 2688
Anarsia lineatella, 2671o, 3558, 3559
Anasa tristis, 594, 1738
Anastrepha ludens, 1076, 1068d, 4127t
Anatomy, plant, studies on, 1131
Anavitrinella pampinaris, 2513
Ancylis comptana fragariae, 408
Anemone—
  diseases, 903, 2330
  forcing, 1991
  soilless culture, 1991
  wild, and their control, 3621
Angelica archangelica, 823
Angiosperms, classification of, 1374w
Angitia cerophaga, 567
Animals, wild, protection of crops against, 2154, 2155
Annatto, chemical study on, 3933
Annona senegalensis, 2948o
Annona spp., diseases, 4132
Annual Reports—*see also* Reports *and* Yearbooks—
  Aalsmeer Res. Stat. Floric., 2950
  Adelaide bot. Gdn, 3234r
  Admont Bundesanst. alpine Landwirtsch., 524
Annual Reports (*continued*)—
  Alberta Dep. Agric., 1285a
  Algér. Cons. Exp. Rech. agron., 3208
  Alkmaar Exp. Stat. Veg. Growing in the Open, Holland, 3699
  Amsterdam roy. Inst. Tropics, 1285o
  Amsterdam trop. Prod. Dep., 1277
  Aomori Apple Exp. Stat., 260c
  Arizona agric. Exp. Stat., 3234b
  Arnhem Inst. appl. biol. Res. in Nature, 1285g
  Australia(n)—
    Canned Fruits Bd, 2340a
    C.S.I.R.O., 1258
    Dried Fruits Control Bd, 1468c
  Balsgård Fruit Breed. Stat., 2421, 4271
  Boskoop Tree and Shrub Nursery exp. Stat., 3943
  British Columbia—
    agric. Statistics, 3234c
    Climate, 1285c
    Dep. Agric., 2322
  British Guiana Dir. Agric., 4294b
  British West Indies centr. Sugar Cane breed. Stat., Barbados, 1193
  California Dep. Agric., 1255
  Cameroons Develop. Corp., 4272
  Canada Dep. Agric., Dir. Sci. Serv., 4294d
  Canada, Minist. Agric., 2323
  Canterbury agric. Coll., N.Z., 2340c
  Cawthron Inst., N.Z., 1256
  Ceylon—
    Coconut Res. Inst., 2194
    Dir. Agric. Administ. Rep., 1257
    Tea Res. Inst., 1216
  Cheshunt exp. Res. Stat., 4294e
  Chipping Campden Fruit Veg. Canning Quick Freez. Res. Ass., 1285f
  Comité nat. Étude Cult. fruit., Belgium, 1382
  Cyprus Dep. Agric., 1259
  Danish—
    Inst. Weed Res., 2737t
    Seed Testing Stat., 3234s
    Service Seed Path., 3234a
  Dominica Dep. Agric. For., 3234e
  East African—
    Agric. For. Res. Organ., 3213
    Sisal Ind., 832
    Tea Res. Inst., 1217
  East Flanders advis. Serv. comm. Hort., 525, 4282
  East Malling Res. Stat., 3214
  Edinburgh and East of Scotland Coll. Agric., 2340d
  FAO Director-General, 1285d
  FAO expanded tech. Assist. Progr., 1262
  Fiji Dep. Agric., 3234f
  Florida agric. Exp. Stats, 2325
  Friesdorf/Bad Godesberg gärtn. Versuchsanst., 870, 4275
  Geisenheim/Rheingau, Bundesanst. Qualitätsforsch. pflanzl. Erzeugn., 4294c
  Geisenheim/Rheingau, Lehr- u. Forsch-Anst. Wein-, Obst- u. Gartenb., 4276

Annual Reports (*continued*)—
Gold Coast Dep. Agric., 3215
Gumpenstein Bundesversuchsanst. alpenländ. Landwirtsch., 3696
Hawaiian Sugar Planters' Ass. Exp. Stat. Cttee, 2246
Hong Kong Dir. Agric., 4294f
hort. Educ. Ass., 2326, 4294g
hort. Res., Minist. Agric., The Hague, 1260
La Hulpe Stat. provinc. Rech. sci. Vitic., 1485
Imp. Coll. trop. Agric., Trinidad, 4294h
India, South—*see below*, United Planters'
Indian Coffee Bd, 2204
Indian Tea Ass., sci. Dep. Tocklai, 2284
Indonesia C.P.V. Exp. Stats, 4278
Inst. Fruits Agrumes colon., Paris (I.F.A.C.), 3234g
Inst. Fruits Agrumes colon., Stat. centr. Cult. fruit. Kindia, 3217
Inst. nat. Étude agron. Congo belge (I.N.É.A.C.), 1265
Inst. nat. Rech. agron., Paris, 1266, 3234h
Inter-Amer. Inst. agric. Sci., Turrialba, 4279
Iowa Div. Agric. St. Coll. and agric. Exp. Stat., 1267
Ireland, Republic of, Minist. Agric., 1285h, 3234i
Jamaica Dep. Agric., 1268, 1285i, 4280, 4294i
John Innes hort. Instn, 4281
Jordan agric. Res. Serv., 1269, 3218
Kenya Dep. Agric., 1285j, 3219, 4283
"Lange Ossekampen" centr. manurial Trial Ground, 3234j
Lausanne *et al.*, Stats féd. Essais agric., 2327
Long Ashton agric. hort. Res. Stat., 1270, 4294k
Luddington exp. Hort. Stat., 4294p
Macaulay Inst. Soil Res., 3220
Madras Dep. Agric., Work of agric. Stats, 2328
Malaya Dep. Agric., 1271
Massachusetts agric. Exp. Stat., 3222
Mauritius Dep. Agric., 4284
Mauritius Sugar Ind. Res. Inst., 3161
Michigan agric. Exp. Stat., 1285 l
Minnesota agric. Exp. Stat., 1285m
Naaldwijk Res. Stat. Fruit Veg. Cult. under Glass, 3223
N.A.A.S. exp. Hort. Demonstr. Stats, Great Britain, 4294m
(and Guide) nat. Inst. agric. Bot., Cambridge, 3695, 3856c
New Hampshire agric. Exp. Stat., 3227
New York St. agric. Exp. Stat., 1285n
New Zealand Dep. Agric., Hort. Div., 2329
New Zealand D.S.I.R., 1261
Nigeria Dep. Agric., Northern Region, 2340h, 4294q
North Carolina agric. Exp. Stat., 1274
Nottingham Univ. Sch. Agric., 4292
Pennsylvania agric. Exp. Stat., 3234q
Pflanzenschutzämter, Brunswick, 1512
Puerto Rico fed. Exp. Stat., Mayagüez, 1272
Annual Reports (*continued*)—
Queensland Bureau Sugar Exp. Stats, 2248
Queensland Dep. Agric. Stock, 2331
Rhodesia and Nyasaland, fed. Minist. Agric., 1276
Rubber Fund Bd North Borneo, 4255j
Rumbeke-Beitem exp. Gdn, 1380, 1381
St. Vincent agric. Dep., 2306 l
San Remo floric. Exp. Stat., 2951
Sarawak Dep. Agric., 1285p
Scotland Dep. Agric., agric. Statistics, 3234d
Scottish hort. Res. Inst., 1285q, 4288
Seychelles Dep. Agric., 2340i
Shell Serv. for the Fmr, Venezuela, 4289
Sierra Leone Dep. Agric., 1285r
Singapore bot. Gdns Dep., 1285s
Sisal Res. Stat., Mlingano, Tanganyika, 2930
Soc. Pomol. Cult. fruit. Prov. Québec, 4290
South Africa(n)—
Dep. Agric., 3226
Div. Bot. Plant Path., 3080
Div. Citrus subtrop. fruit Res., 3221
Div. decid. Fruit Res., 3225
Div. Ent., 3224
Tobacco Res., 2868
Summerland, B.C., summary of, 3229
Surinam Dep. Agric., 2332
Tanganyika Dep. Agric., 3230
Tanganyika Govt Chem., 3234t
Tea—*see above*, Ceylon, East African *and* Indian, *and below*, United Planters'
Tobacco Statistics, 2867
Trinidad and Tobago, Dir. Agric. Administ., 1278
Uganda Dep. Agric., 4291
United Planters' Ass., S. Indian, Tea sci. Sect., 3178
United States, agric. Statistics, 2334
Vegetable Res. Stat., Wellesbourne, nat., 4293
Waite agric. Res. Inst., S. Aust., 1285t
Wattle Res. Inst., Pietermaritzburg, 1951
West African Cocoa Res. Inst., Tafo, 2163
West African Inst. Oil Palm Res., 3149
West Bengal Dir. Agric., 1279
West of Scotland agric. Coll., 1280
West Virginia agric. Exp. Stat., 1281
Wilhelminadorp Exp. Stat. Fruit-growing in the Open, 1379
Zanzibar Dep. Agric., 1285v
Zürich-Oerlikon, eidg. landw. Versuchsanst., 1285w
Ansatospora macrospora, 2776
Ant(s), harmful, and their control, 2102, 4030a, 4127g, 4173
Antestia sp. on coffee, 4291
Anthocoris musculus, 2619
Anthocyanin—*see* Pigments
Anthonomus irroratus, 3143
Anthonomus musculus, 2513
Anthores leuconotus, 1234v, 4174
Antibiotics—*see also* Phytoncides—
adjuvants for, 729, 3766
from bacteria, 623

Antibiotics (*continued*)—
as bactericides, 47, 353, 581, 623, 721, 729, 730, 848, 850, 948, 1261, 1274, 1553-1555, 1890, 1941, 1980, 2585-2589, 2670n, 2801, 2802, 2862, 2863, 2894, 2895, 3038, 3739, 3766, 3897, 3967
determination in plant tissues, 1943
from fungi, 2659, 3511
as fungicides, 361, 584, 624, 849, 1975, 2028, 2447, 2659, 2768, 2816, 2853, 2855, 2865w, 2866s, 3741, 3884, 4106, 4170
in or from higher plants, 848-850, 1939, 1940, 1954i, 2948n
from lichens, 3897
plant uptake and translocation of, 47, 1943, 2588, 2755, 2803, 3041b
plants injured or otherwise affected by, 46, 68, 353, 1942, 1975, 2670n, 2754, 3961
residues on plants, 2671 l
reviews, 1940, 3597u
Anticarsia gemmatilis, 4131
Antirrhinum—*see* Snapdragon
Antispila rivillei, 3598i
Anuraphis—
helichrysi—*see Brachycaudus helichrysi*
roseus, 2629, 2962
viburnicola, 2962
Aomori Apple Exp. Stat., A. R., 260c
Aonidiella aurantii—*see* Citrus pests, scale, red
Aonidiella citrina, 1021, 3090
Aonla—*see Phyllanthus* spp.
Aphanomyces spp., unspecified, 1757
Aphelandra fusca-punctata, 3042d
Aphelenchoides—
fragariae, 397
ritzema-bosi, 397, 4030d
spp., unspecified, 2812
Aphids—*see also under scientific names and host plants*—
assessment of damage caused by, 1014
control—
biological, 445r
by seed treatment, 1687
by sprays and dusts, 429, 445r, 629, 782, 1596, 2631, 2634, 2769, 2831, 2857, 3575, 3583
by systemic insecticides, 430, 917, 1595, 1583, 1594-1597, 1629, 1687, 1762, 2630, 2632, 2633, 2857, 2861, 3885, 3912
as virus vectors, 620, 732j, 733e, 1548, 1549, 1755, 2861, 3495, 4080, 4127h, 4127i
Aphis—
craccivora, 1235e, 1762
fabae, 2962
gossypii, 1735, 4080, 4127h, 4127i
pomi, 1583, 2629, 2630, 2962
spiraecola, 4127h
Aphrodes bicinctus, 974 l
Aphytis spp., parasites of scale insects, 3156, 3597n
Apiose in plants, 4255 l
Aplodontia rufa, 3598j
Apocynaceae, glycosides from 865e
Apocynaceae, latex chemistry, 851
Aporia crataegi, 419
Apparatus and instruments—*see also* Irrigation equipment, Machines, Spray equipment *and* Tools, *and well-known types of apparatus under their common names*—
for adjusting fruit-sizing machines, 2121
cabinet for aseptic manipulations, 117m
for collecting pollen, 3309
for collecting pollinating insects, 2214
for controlled environment chambers, etc., 766, 1362
for controlling temperature, 2415p
for counting bacteria and leaf lesions, 2669
for counting seeds, 2393
for cutting leaf discs, 117x
for determining, measuring or recording—
air movement in leaves, 1332
air pollutants, 118j
colours, 326k
dry rubber content in latex (metrolac), 2242
evapotranspiration, 115
firmness in fruits and vegetables (penetrometer, tenderometer, etc.), 612, 3441
fruit cracks, 445z
light, 4288
low volume sprays, 3310
moisture in tobacco, 801, 3892n
nutrient salt concentration, 118d
soil moisture, 116, 1367, 1368, 1374x, 2413, 3315q
temperatures of air, 2415s
transpiration, 3308
tree height, 3314
turgor of plant tissues, 1375a
viscosity, 4254g
water movement in plants, 117d
water uptake by seeds, 2396
for dipping and treating sugar-cane setts, 1211, 1235f, 3172
electrical, for bird control, 2671i
for freezing plants *in situ*, 3477
for fumigating soil—*see* Fumigation, soil
for grinding leaf samples, 1373
humidifiers—*see* Humidifiers
for injecting plants, 751
for injecting soil—*see under* Fumigation, soil, methods, *and* Nutrition by injection into subsoil
for inoculating fruit, 1038
for microextraction of sugar, 27
potometer, 2396
seedbed furnace, 746
for soilless culture—*see* Soilless
for washing tissue or seeds, 1372
Apple—*see also* Cider *and Malus*—
biennial bearing—*see below*, fruiting
blossom—*see below*, flower
breeding and selection—
colchicine treatment, 2422
general, 126, 129, 371, 2504m
polyploids, 3327
X-ray treatment, 130, 131
calyx tubes, open, 2671b

Apple (*continued*)—
chimaeras—*see below*, mutations
climate—
disorders due to abnormal, 2670j
drought resistance, 2572
heat injury, 350
spring frost injury and protection, 187, 344, 1528
temperature of crown, 2450
temperature responses, 1417, 1431, 3356
windbreaks, 1526, 1527
winter—
chilling requirements, 129, 352
hardiness—*see also below*, rootstocks, hardy *and* varieties, hardy—348, 2566, 3264, 3316 l
injury, 1529, 2466, 2565, 3487
composition—*see also below*, nutrition—
fruit, 207, 250-253, 255, 259, 260f, 261b, 405, 1444, 1460, 2458, 2484, 2485, 3264, 3315v, 3376, 3392, 3402
leaf, 208, 210, 211, 215, 260f, 337, 1442, 1516, 1519, 2417, 2449, 2459, 2484, 2503h, 3383, 3408p
pollen and seed, 2484
shoots and branches, 208, 3385, 3408n
diseases—*see also below*, storage—
bacterial, fireblight (*Erwinia amylovora*), 361, 1264, 1274, 1554, 2585
cause uncertain, 335, 357, 2562, 3492
fungus—
black rot (*Physalospora obtusa*), 368
Botryosphaeria ribis, 364, 2590
brown rot (*Sclerotinia fructigena*), 3517
canker (*Gloeosporium perennans*), 365
canker (*Phomopsis mali*), 3512
canker or eye rot (*Nectria galligena*), 366, 367
carpel rots, 2671b
fungicides for, 3222, 3500
lenticel rot (*Gloeosporium* spp.), 232, 2591-2593, 3398, 3598 l
mildew (*Podosphaera leucotricha*), 370, 375, 1558, 2594, 3502, 3514, 3515
phytophthora, collar or crown rot (*Phytophthora cactorum*), 160, 369, 3513
Pythium spp., 2447
root rot, black (*Xylaria mali*), 2600
rust (*Gymnosporangium juniperi-virginianae*), 2028, 3521
scab (*Venturia inaequalis*)—
biology, 372, 3509
control—
by cinnamic acid, 3501
general, 372-377, 431, 1513, 1556-1558, 1634, 2322, 2418, 2595-2599, 2663, 2670a, 2671t, 3502, 3505-3507, 3510
by ground treatment, 3508
by low-volume spraying, 373, 374, 443, 445w, 3503, 3504
resistance, 371, 3343
Apple—diseases—fungus—scab (*continued*)—
warnings and spore discharge, 372, 2597, 3509
silver leaf (*Stereum purpureum*), 2671e
non-parasitic, 337, 2563
virus—
Amelanchier an indicator for, 2576
concentric striping, 3494
flat limb, 358, 2575, 3492, 3493
freedom from, 2573
identification of, 355
mosaic, 1538, 1539, 2562, 2574, 3493
oval limb, 3493
rubbery wood, 356, 3493
economics—
marketing, 3396
planting, 260q
storage, 3396
tree height and type, 2464, 3360
flower(ing)—
autumn, 184
bud differentiation and development, 183, 184, 1434
bud size, fruit yield related to, 186
morphology, 1432
in rootstocks, 165
thinning by sprays—*see also below*, fruit—198, 260e, 1261, 2417
time of, 1431, 3356
frame builders—*see below under* interstocks
frost effects—*see above*, climate
fruit(ing)—*see also above*, composition, *and below*, harvesting, packing *and* storage—
biennial, 186, 1434, 1439, 2465, 2475, 2476, 3364, 3368
bud—*see above*, flower
cell number, factors affecting, 207
colour—*see also below*, flesh—factors affecting, 2598, 3375, 3394
colour, sprays to improve, 200
cracking, 445z, 3387
drop, factors affecting, 250
drop, spraying or dusting to retard, 200, 1264, 2477, 2480, 2481, 3375, 3376
flesh, colour changes in, 253
grading, 227
growth, 2504w, 3394
maturity—
growth substances affect, 200, 201, 1440, 2417
physiology of, 250, 251, 254, 260b
tests, 251, 252, 1264, 2486
parthenocarpy, natural and induced, 3330
quality, factors affecting, 205, 3375, 3376, 3387, 3693d
sampling, 3317
set, flower position in cluster affects, 187
size, factors affecting, 187, 207, 211, 2458
thinning—*see also above*, flower—187, 198, 1382, 1439, 2474-2477, 2504i, 3363-3368
yields, 121, 176, 186, 2439

Apple (*continued*)—
growing—*see also below*, research *and* varieties—
in European countries, 1391, 2504a, 2504j, 3323
in Pakistan, 2503o
in Turkey, 351
in the U.S.A., 3321
growth—
bud opening, growth substances delay, 53
herbicides affect, 3617
measurement, 2399, 3317
nutritional effects, 208
phases, juvenile and mature, 3328
propagation method affects, 155
root, factors affecting, 195, 1437, 1438, 1447, 2440, 2441
root, temperature affects, 1417
shoot, 2448
soil pH in relation to, 337, 2400
sphaeroblasts, 3355
spur, 2449
stem height affects, 176
harvesting methods, 224, 1449, 1450, 3395
harvesting, time of, 2504v
interstocks, 163, 229, 1418, 2439, 2440, 2442, 3346
irrigation—*see below*, soil management
leaf, anatomy, 191
leaf, moisture-retaining capacity, 2572
marketing—*see also below*, packing—2504e, 3396
mutations, 130-134, 1395, 1396, 2428, 2429, 3329
mycorrhiza, 2534
nursery trees, storage of, 3351
nutrition—*see also above*, composition—
boron, 1640b
copper, 1256
foliar—*see also below*, nutrition, nitrogen —214
iron, 1447
leaching by rain, 210
magnesium, 214, 215, 334, 1256, 1519
manganese and molybdenum, 337
manuring, 207, 208, 1380, 2322, 3234j
nitrogen, general, 1416, 1444, 2453, 2457, 2458
nitrogen, urea sprays, 207, 211, 214, 1447, 2591
phosphorus, 206, 214, 2458, 2459, 3329
potassium, 206, 215, 1517, 1519, 2457, 2458, 3383
packing—
containers, 227, 2759
economics, 3396
grading, 227
house layout and equipment, 227
methods, 1454, 1468h
×pear hybrids, 2423
pests—
aphid, green (*Aphis pomi*)—*see also below*, woolly, 1583, 2629, 2630
Apple—pests (*continued*)—
aphids, various (*Anuraphis*, *Rhopalosiphum* and *Yezabura* spp.), 1629, 2629
bark borer (*Thamnosphecia pyri*), 2671y
borers (various), 2639
buffalo tree hopper (*Stictocephala* (*Ceresa*) *bubalus*), 1601
codling moth (*Cydia pomonella*)—*see also* Codling moth—406, 407, 421, 1583, 1611, 1621, 2645, 2646, 2671c
control, general, 443, 3576, 3584
curculios (*Conotrachelus nenuphar* and *Tachypterellus quadrigibbus*), 2645, 3222
dock sawfly (*Ametastegia glabrata*), 425
eye-spotted bud moth (*Spilonota ocellana*), 1513
fruit flies (*Anastrepha*, *Ceratitis* and *Dacus* spp.)—*see also below*, pests, maggot—407, 1603
leafhoppers (various), 1621
leaf miners (*Lyonetia*, *Lithocolletis* and other spp.), 1614, 3561
maggot (*Rhagoletis pomonella*), 1606
mice, voles and rats, 1620, 3568
mites, red spider (*Metatetranychus* and other genera), 398-401, 405, 406, 1583, 1585, 1586, 1629, 2619-2624, 2626, 3575, 3576
nematodes, 207, 396, 2330
Oiketicus kirbyi, 407
oriental fruit moth (*Cydia molesta*), 407
Orthosia spp., 2648
Pamene rhediella, 3564
red-banded leaf roller (*Argyrotaenia velutinana*), 406, 2645
sawflies (*Hoplocampa* and *Ametastegia* spp.), 1629, 3597b
seed chalcid (*Torymus druparum*), 1602
tortrix moths (*Tortrix*, *Adoxophyes* and *Pamene* spp.), 2649, 2670u, 3564
in the U.S.A., 1640k
winter moth (*Operophtera brumata*), 1612
woolly aphid (*Eriosoma lanigerum*), 162, 1583, 1593, 1594, 2631
physiology—*see also below*, storage—
auxin transport, 193
carbohydrate metabolism, 3408n
enzyme activity, 2474
photoperiodic response, 194, 260g
photosynthesis, 1416
tissue culture, 118g
water relations—*see also below*, soil management, irrigation *and* mulching, *and* soil water—184, 189, 190, 1531, 2566, 3369, 3408n
planting—
costs, 260q
on old apple soils, 1521
systems, 3360
pollination—
artificial, 1425, 2471
by bees, 2663
compatibility, 170, 2470, 3352

Apple—pollination (*continued*)—
fruit and seed characters affected by male parent, 2469
pollen composition, 2484
pollen viability and germination, 170, 171, 1422, 1425, 1468f, 2471, 2664, 3354
products and by-products, 255, 2425
propagation—*see also below*, rootstocks *and* seed—
cuttings—
leaf-bud, 154
with nurse root grafts, 2436
stems, 152, 1408, 2457, 3340, 3343
double-shield budding, 1412
double working—*see also above*, interstocks—3347
marcotting, 2503u
method, growth affected by, 155
on own roots, 3342
pruning and training—
arching, 3357
for biennial bearing control, 2465
cordons, espaliers and hedges, 1468e, 3359
free palmet, 179, 180
after frost injury, 2466, 3487
general, 260t, 1377, 2463, 2503p, 2504n, 4290
methods compared, 2504x, 3358
spindle bush, 181
research in various countries, 260c, 1383
root—*see above*, growth *and* mycorrhiza
rootstocks—*see also above*, interstocks *and* propagation, *and below*, seed—
"A" series (Sweden), 260z
Anis, 164
Antonovka, 164
in Australia, 1413
Cotoneaster bracillaris, 162
crab, 152, 2448
flowering in, 165
fruit storage quality affected by, 2442
in Great Britain, 2504d
hardy—*see also above*, climate—161, 164, 1529, 3345
Malling, 139, 160, 1412, 1415, 1416, 1529, 2439
Malling-Merton (MM.), 260x, 261a
Malus—
baccata, 164
robusta, 154
sieboldii, 1414
spp., selection of, 3343
Merton, 160, 162
in New Zealand, 160, 1256
Northern Spy, 159, 1529
as nurse roots, 2436
nutrition, 1416
in Pakistan, 162
Pillnitz, 1529
Pyrus spp., 162
quince, 162
-scion relationships, 163, 2439-2441, 2446, 2504x, 3345, 3347

Apple—rootstocks (*continued*)—
seedling—
raising of, 2437
uniformity in, 156, 1414
varietal studies, 158, 3344
soilless culture, 2447
stem effects, 2440
in Sweden, 139, 260z, 2503q
in the U.S.S.R., 161, 2503x, 3344
virus-free, 2573
scion-rooting, 3342
seed—
after-ripening, 144, 3337
composition, 2484
embryo abortion, 2474
embryology, 2504p
germination, 2432, 3337
halving for clonal seedlings, 148
rootstock propagation from—*see above*, rootstocks, seedling
storage, 149
soil—
conservation, 2455
management—
cover crops and grass, 260s, 367, 1447, 2453, 2455, 3389
of dry, 1531
irrigation, 222, 2503w, 3386, 3387
methods compared, 216
mulching, 2455, 2456
weed control, 2690, 2691, 3600, 3616-3618, 3693d
moisture responses—*see above*, physiology, water relations, *and* soil management, irrigation, *and below*, soil water
pH, growth response, 337, 2400
root growth affected by, 1437
sickness, 1521, 2561, 3538
temperature, 3356
water tables, 1447
waterlogging and flooding, 2670j, 3490
spray—
injury, 201
programmes and calendars, 2645, 2671v, 3597o
residues, 434, 1631, 3591, 3595
stem-builders—*see above*, interstocks
storage—
air purification in, 3397, 3399
carbon dioxide injury, 3402
cold, 247, 260y, 1461, 2495, 2497, 3403
dips and coatings, 238, 387
diseases, rots, 230, 232, 364, 387, 2591-2593, 3398, 3511
disorders, physiological, 229, 230, 236, 238, 239, 1462, 2442, 2497, 2498, 2591, 3387, 3401, 3403, 3510, 3598m
economics, 3396
fungicidal paints for walls, 249
gas, 207, 240, 260v, 1459, 2495, 2498, 3403
general, 2504b, 2504v, 3408m
humidity control in, 2495, 2496

Apple—storage (*continued*)—
metabolic changes during, 233, 254, 1460, 2458, 2497, 2499
plastic bags or box liners for, 236, 237, 1463, 3404
pre-cooling treatment, 230
quality, factors affecting, 205, 207, 211, 229, 233, 240, 1440, 1464, 2442
respiration, 231, 2499
transport, 3303
varietal behaviour, 233, 234, 239, 253, 1461, 1462
volatile substances, 231, 234, 235, 3399, 3400
weight loss in, 241, 2495
thinning—*see above*, flower *and* fruit
training—*see above*, pruning
tree height, 176, 2464
varieties—*see also above under* growing *and* storage—
in Belgium, 1380, 1381
Blenheim Orange, 1377, 1397
in Canada, 3408t, 4290
cider, 170, 177, 178, 1400
Close, 3320
collections, 1468f
crab, 255
in Cyprus, 1468k
Delicious, 200
disease resistance, 1267, 1398, 2590, 3517
Erwin Baur, 138, 1398
in France, 1400, 2503g, 2504q
Golden Delicious, 2504n
in Great Britain, 270
Gravenstein, 260d
hardy, 1398
Ingrid Marie, 139
Jonadel, 136
Lobo, 3320
McIntosh, 163, 233, 234, 253
Melrose, 3320
Meredith, 261d
Mio, 2427
in New Zealand, 2504y
in North Africa, 2504q
in Norway, 3408s
Perkins, 1399
for processing, 140
Rome Beauty, 1461, 1462
Scarlet Pimpernel, 137
Sir Isaac Newton's, 1377
Snövit, 2427
sports—*see also above*, mutations—red, 133
Stark Earliest, 3320
in Sweden, 260h
in Switzerland, 2504m, 3408u
Taunton Cross, 3320
tetraploid, 1395, 1396
Tydeman's Early Worcester, 3320
in the U.S.A., 1393, 2426, 2503r, 3326
in the U.S.S.R., 260m, 261c
Wellington, 260o
weeds—*see above*, soil management
yields—*see above*, fruit

Apricot—
breeding, 126
climate—
drought effects, 3489
spring frost damage and protection, 204
temperature responses of fruit, 1433
winter hardiness and injury, 3479
diseases—
bacterial, 362, 2586, 3597i
cause complex, decline, 1524, 1533
fungus—
gummosis (various organisms), 341, 1561, 3598x
mildew (*Podosphaera oxycanthae tridactyla*), 2602
shot-hole disease (*Clasterosporium carpophilum*), 1560
wilt (*Verticillium* spp.), 2603, 2604, 2671g
non-parasitic, 351
virus, 2671h
fruit—
composition, 259, 3392
drop, growth substances retard, 203
growth substances affect, 203, 204, 2482
maturity, tests for, 1453, 3393
growing in Australia, 1403
growing in the U.S.A., 3321
harvest forecasts, 1433
harvesting, 1453
nutrition, major elements, 3380
nutrition, minor elements, 1640b
packing, grading, 2504h
pests, insect, 1621
pollination, 173
processing, 1453, 3393
products and by-products, 258
pruning and training, 341
rootstocks, 2444, 2446, 2503q,
seed germination, 2432
soil management, irrigation, 3489
soil management, weed control, 2690
storage—
cold, 1453
gas, 2500
respiration in, 2501, 3406
wraps, 237
varieties, 1403, 2424, 2430, 2503s, 3331
Arctic crops, vegetables, 2865i
Arctic ornamental trees and shrubs, 941
Arctium lappa, 537
Ardisia malouiana, 2053t
Areca palm diseases, sun scorch in relation to, 4249, 4250
Argentina—
agriculture and agricultural research, 3210
crops, fruit, 1048, 1389
crops, vegetables, 1676
ornamental plants, 1389, 4030f
Argyresthia eugeniella, 3143
Argyria sticticraspis—see Chilotraea infuscatella
Argyrotaenia velutinana, 406, 2645
Aristolochia indica, 1918
Arizona agric. Exp. Stat., A.R., 3234b

Armillaria mellea, 445g, 4264
Arnhem Inst. appl. biol. Res. in Nature, A.R., 1285g
Aromatic plants—*see also* Essential oils—1954g
Arsenic contents of plants, 781
Arsenic sprays—*see* Citrus fruit maturity, sprays affect, *and under* Insecticides
Artemisia—
arbuscula, 3683
maritima, 816, 817
tridentata, 468
Artichoke—
globe—
diseases, 2760
growing in various countries, 1704
pests, 1255, 2761
Jerusalem, varieties, 3695, 3787
Artocarpus spp. (jackfruit), 3186
Arum lily, 904, 2983
Ascochyta pisi, 624, 626
Ascochyta spp., unspecified, 2804
Ascorbic acid—*see* Vitamin C *and individual plants under* composition
Aseptic culture of higher plants—*see also* Embryo culture *and* Tissue culture—2415c
Asia—*see also separate countries*—Near or Middle East, scientific papers published in, 7
Asima triloba, 125
Asparagus—
composition, 3856z
diseases, fungus, 1706-1708
flavour, herbicide effects on, 496
growth substance responses, 2758
harvesting, 1705
nutrition, 2322
pests, 3713
plumosus, 2950
soil management, weed control, 494, 496, 497, 1668, 1669, 2705, 2706, 2738, 3600, 3653, 3693i
soil requirements, 551
Aspergillus luchuensis, 1233
Aspergillus niger, 1567
Aspidiotus spp., unspecified, 2962
Aster—
diseases, 974 l, 1971, 2950, 3947, 3948
pests, 4030d
seed germination, 1963, 1971
seed treatments, 3947, 3948
varieties, 2968
Astrocaryum sciophilum, 2948v
Athalia colibri, 2864h
Atmospheric pollution—*see* Air
Atmospheric pressure, respiration affected by, 40
Atomic energy in horticulture, 3315f
Atriplex halimus, 974e
Atriplex hortensis, 29
Atropa belladonna, 2913, 2914
Auchincruive—*see* West of Scotland agric. Coll.
Australia(n)—*see also individual States*—
agricultural statistics, 8
Canned Fruits Bd, A.R., 2340a
crops—
deciduous fruits, 1392, 1403
ornamentals, 974y
nuts, 326i
small fruits, 2558b, 2558h
tropical and sub-tropical fruit and plantation—*see also* Tobacco growing—1046, 1068k, 3119k, 4128e
various, 1903k
vegetables, 3856s
C.S.I.R.O., A.R., 1258
minor element deficiencies, 3316j
Austria, crops, various, 2558 l
Austria, crops, vegetables, 524, 532, 1837y, 3696
Avena fatua, 450, 488
Averrhoa carambola, 1232
Avocado—
climate, air pollution, 3246
climate, temperature responses, 2060, 3047
composition, fruit, 1068a, 3217
composition, leaf, 2055
diseases—
fungus—
root rot (*Phytophthora cinnamomi*), 2064, 2065, 3044
various, 3217
wilt (*Verticillium albo-atrum*), 2148y
non-parasitic, discoloration, 3047
non-parasitic, leaf necrosis, 978
virus, sun blotch, 2056
flower bud initiation and development, 4034
fruit—
fumigation, 2068, 2069
maturity, physical characters in relation to, 3046
quality, factors affecting, 3047
respiration, 2069
set, night temperature affects, 2060
tissue culture, 977
growing in various countries, 4128e
growth, growth substances stimulate, 4033
mutations, 4127 l
nutrition—*see also above*, composition—
foliar, 976
manuring and major elements, 2055, 2056, 2065, 2081, 3043, 3280, 4033, 4048
minor elements, 91, 2059, 3280, 3282, 4049
sodium and/or chloride injury, 2057
pests—
Amorbia essigana, 978
control, biological, 2066
looper (*Sabulodes caberata*), 978, 2066
mealybugs, 2066
mites, 2066, 3119b
nematodes, 2067, 3045
scale insects, 2066, 2962
in the U.S.A., 3119b
pollen production, 2061
pollination, 2062, 3221
propagation by budding and grafting, 4032

Avocado (*continued*)—
propagation by top-working, 2063, 2148e
roots, cation-exchange capacity, 3057
rootstocks, clonal, 2057
rootstocks, seedling, 2148y
soil management, methods compared, 2081
soil management, weed control, 2722
storage, frozen pack, 3119j
storage, normal, 3047, 3221
varieties, 1393, 3208, 3217, 4127e, 4127 l
Azalea—*see also* Rhododendron—
diseases, 3041q
flower bud development, 2035, 4025
flower forcing, 2053d
frost injury and resistance, 3025, 3222
growing in containers, 2031
growing in various countries, 2053m
nutrition, iron, 4010
nutrition, manuring and major elements, 951, 2035, 2959, 3024
pests, 879, 3041q, 4030t
pollen storage, 1422
propagation by cuttings, 3024, 3950, 4008
pruning, 4025
soil composts for, 2031
soil management, weed control, 1654
Azotobacter, seed or soil inoculation with, 3701, 3702

Baccharis halimifolia, 974e
Bacillus thuringiensis, 1715
Bacteria(l)—
apparatus for counting, 2669
diseases, general—*see under individual crops and organisms*
fertilizers, 2743, 3702
mucus forming, control of, 1817
toxins produced by, 2896
Bactericides—*see also* Antibiotics *and* Seed treatment—reviews on, 3597x
Bacterium—see also Erwinia—
armeniaca, 2586
herbicola, 623
rhizogenes, 445q
tumefaciens—see Crown gall
Bahamas, medicinal plants, 813
Bailey Hortorium, 869
Balanogastris kolae, 2303
Balsgård Fruit Breed. Stat., A.R., 2421, 4271
Bamboo—*see also Bambusa, Cephalostachyum, Guadua, Phyllostachys, Pseudosasa, Semiarundinaria and Sinocalamus*—
flowering and fruiting, 3935
growing as hedges, 863
growing in Puerto Rico, 865w
harvesting, 1272
pests, 3934
propagation, 864, 1272
Bambusa spp., bamboos, 864, 865w, 3934
Banana—*see also Musa*—
climate, wind protection, 2346
composition, fruit, 1088, 3391
composition, plant, 3124
Banana (*continued*)—
diseases—
bacterial, moko (*Pseudomonas solanacearum*), 3125
cause uncertain, split corm, 2157
fungus—
leaf spot (*Cercospora musae* (*Mycosphaerella musicola*)), 1235s, 4134
panama disease (*Fusarium oxysporum* var. *cubense*), 2158
stalk rot (*Fusarium moniliforme*), 3126
economics, 4255f
flower initiation and development, 1038
fruit—*see also above*, composition, *and below*, packing, storage *and* transport—
development, 1083
maturation and its estimation, 3391
splitting, growth substances prevent, 4138
growing in—
the Belgian Congo, 4133
Cyprus, 2156
East Africa, 4255r
India, 1080, 2310
Israel, 1078
the U.S.S.R., 1235 l
the West Indies and Central America, 1079, 2306j
growth phases, 1082
mutations, 1080
nutrition, 1084, 2157
packing, 1087, 2159
pests, borer (*Cosmopolites sordidus*), 1085, 4135, 4136, 4254c
planting and spacing, 1081, 4255f
production and trade, 1069, 2306j
products and by-products, paper, 1089
research in—
French West Africa, 3217
India, 1279, 2306a
Jamaica, 4280
soil management, rotations, 4133
storage—*see also below*, transport—
cool, 3221
disorders, 2161
ripening, artificial, 3127, 3128, 4138
transport, 1086, 2159-2161, 4137
varieties and species, 1080, 2305h, 2305p, 3192q, 4256f
Baobab (*Adansonia digitata*), 2299
Barium in soils and plants, 3288
Basil—*see under* Camphor basil
Batocera rufomaculata, 3548
Beans—*see* Beans (*Phaseolus*), Beans (*Vicia*), Cover crops, *and individual species*
Beans, asparagus—*see Vigna sesquipedalis*
Beans (*Phaseolus*)—*see also Phaseolus*—
breeding and selection, 531, 599, 621, 2865f, 3754
climate—*see also below*, physiology—
air pollution, 25, 1008, 3246, 3247, 3710
frost protection and resistance, 531, 2406
hail damage, 2738

Beans (*Phaseolus*) (*continued*)—
composition—*see also below*, nutrition—
leaf, 3764, 3765
plant, 616, 3761
pod and seed, 263, 604, 613, 3855 l
diseases—
bacterial, common blight (*Xanthomonas phaseoli*), 47, 622, 623, 2755
bacterial, halo blight (*Pseudomonas* (*medicaginis*) *phaseolicola*), 596, 2801, 2802, 3766
fungus—
anthracnose (*Colletotrichum* sp.), 596, 625
damping-off and root rots (various organisms), 1758, 1759, 2797, 2864j, 2865f
downy mildew (*Phytophthora* spp.), 2866s
powdery mildew (*Erysiphe polygoni*), 627
rust (*Uromyces* spp.), 2330
soil-borne, 2752
general, 1837f, 3855n
seed decay, 2797
virus, 618, 619, 621, 1755, 1756, 3714, 3764, 3765, 3879
flower differentiation, 606
flower drop, 606, 3758
growing in various countries, 733h, 1704, 3855b, 3856b
growth substance responses, 1338, 2382-2384, 2388, 2711, 2794, 3266, 3315b, 3758
harvesting, defoliation and drying of plants to assist, 634, 635, 2808, 3856 l
harvesting, time of, 1765
herbicide responses, 1671, 3662
leaf development, 1741
nutrition—
boron, 3284
calcium, 3761, 4048
carbonates, 661
chlorides, 3705
fertilizer placement, 2742
foliar, 617, 1750
iron, 90, 91
magnesium, 1753, 3280, 3704, 3761
manganese, 617, 1753
manuring, 1750
nitrogen, 616, 1750, 3760
phosphorus, 616, 2365, 3280
potassium, 3704, 3761, 4048
rubidium, 92, 93, 95
silicates, 3282
sulphur, 2365, 3315e
zinc, 2795, 3760
pests—
aphids, 1687
beetles and weevils (mainly *Acanthoscelides*, *Bruchus* and *Epilachna* spp.), 546, 630, 1764, 2805
Epinotia sp., 628
general, 1837f
Beans (*Phaseolus*)—pests (*continued*)—
Laspeyresia sp., 628
leafhoppers (*Circulifer* or *Empoasca* spp.), 3714, 3770
mites, 2865r
nematodes, 1761
seed flies or maggots (*Delia*, *Chortophila*, *Hylemyia* or *Phorbia* spp.), 631, 632, 2797, 2807, 3713
springtails, 2796
physiology—
absorption and translocation, 47, 56, 57, 615, 1334, 2359, 2365, 2737n, 3057, 3266, 3273, 3315e, 3686
of developing seed, 604
enzyme activity, 2370, 2372
of leaf abscission, 48, 50, 1336, 2383
metabolism, 1311, 1312, 3855a, 3856i
nutrient leaching, 3278
photoperiodic and other light responses, 1325, 2372, 3764, 3765
respiration, 1008, 3259, 3260
temperature responses, 117z, 4048
water relations, 2415d, 2793, 3284
pod—
characters, factors affecting, 2788
colour, 3855 l
quality and maturity, 613, 1765
set, 606
pollination, 599
processing, 597, 598, 3855i
roots—
cation-exchange capacity, 3057
growth, 2792
nodule formation, 2790
rootstocks, 601
seed—*see also above*, composition—
coat rupture, 1748, 2739
development, 603, 604
embryo culture, 602
quality (dry beans), 598
sowing dates, 2788
testing, 3753
treatment, 525, 625, 1685, 1687, 2658, 2796-2798, 2805, 3754, 3768
soil—
management—
cultivation, 1749
fumigation, 4095
irrigation, 653, 1837c, 2747, 2793, 3758
mulching, 4291
weed control, 494, 502-505, 2704, 2710, 2734, 3659-3664
microflora, 2864j
spray injury, 548
spray residues, 733g, 2864y, 3595
staking and stringing, 2865z
varieties, 595-598, 600, 1838d, 2739, 2864c, 3695, 3754, 3855u
Beans, velvet—*see Mucuna*
Beans (*Vicia*)—*see also Vicia*—
antibiotics, translocation and determination, 1943
climate, temperature responses, 3250

Beans (*Vicia*) (*continued*)—
composition, 2786, 2787, 3856f
diseases—
fungus and bacterial, 1259, 1633
general, 1837f
virus, 618
flower characters, 3856m
internodes, anatomy of, 1742
leaf, stomatal guard cells, 44
nutrition—
fertilizer placement, 2742
major elements, 1751, 3856u
minor elements, 1753
pests, aphids, 429, 430, 1687, 1762
pests, general, 1837f
physiology—
enzyme activity, 1317, 2374
metabolism, 30, 2786, 2787
of nodulation and nitrogen fixation, 1751
nutrient translocation, 2803
photosynthesis, 2371
respiration, 3261
processing, 3855i
root growth, 1746
root nodulation, 1751, 2790
seed sowing rates and spacing, 3756
seed treatment, 1687
spray injury, 3577
varieties, 1259, 3855u, 3856m
Beauveria bassiana, 4131
Bee(s)—
fungicides, effects of, 1626
herbicides, effects of, 449, 1626
honey plants for, 18, 1468b
insecticides, effects of, 1626, 1627, 2640
-keeping, 2329
pollination by, 169, 1426, 1427, 1429, 2509, 2558d, 3073
Beet(root)—
climate, air pollution, 662
composition, plant, 2415v
diseases, fungus, 2752, 3855z
diseases, virus, 3855z
mitochondria, 41
nutrition—
carbonates, 661
foliar, 3737
manuring and major elements, 1689, 2744, 3704
minor elements, 1692, 2746, 3316e, 3704
salt absorption, 661
pests, insect, 1799
physiology—
respiration, 1331
tissue culture, 41, 1331, 1779, 1780, 3316e
ultraviolet irradiation responses, 663
root injury, sweet corn residues cause, 542
root, nutritional value, factors affecting, 544
seed—
production, 534
storage, 538
treatments, 1685, 2750, 3699
soil management, rotations, 542, 2740
Beet(root) (*continued*)—
soil management, weed control, 493, 494, 2704, 2738, 3654
Begonia—
composition, 2368
diseases, 2984
forcing, 870
growing in the U.S.A., 3041e
nutrition, 2959
pests, nematode, 1998
physiology, light responses, 2368, 2984, 2985, 4282
propagation by cuttings, 872, 905, 2985
seed germination, 2955
soil sickness, 4282
Belgian Congo—
crops, fruit and plantation, 4133, 4254r
crops, miscellaneous, 846, 1839, 2948g
I.N.E.A.C., A.R., 1265
soils and vegetation maps, 2305o
Belgium—
advis. Serv. comm. Hort., East Flanders, A.R., 525, 4282
Comité nat. Étude Cult. fruit, A.R., 1382
crops, fruits and nuts, 2558n
crops, miscellaneous, 805
Belonolaimus gracilis, 1582, 2018
Berberis mucrifolia, 3041a
Berichte des Instituts für Tabakforschung, Wolsdorf-Biendorf (now *Dresden*), a new periodical, 2337
Bermuda grass—*see Cynodon* spp.
Bibliographies on—
boron, 1346
flora of Indo-China, 2306f
land and water use, 2312
minor elements in nutrition, 3195
molybdenum in plant nutrition, 2361
olives, 1049
pineapples, 2306i
plant protection, 1511
pomegranates, 3408q
scientific papers published in the Middle East, 7
Bicarbonate, respiration affected by, 3259
Bidens spp., control, 3621
Biennial bearing in fruit and nut trees—*see also* Apple, Citrus *and* Mango *under* fruiting 197, 1064, 4114
Bindweed control, 454, 523m, 2679, 2690
Biochemistry, books on, 1244
Biological control—*see* Pest control, Disease control *and* Weed control, biological
Biota orientalis, 952
Birds—
beneficial, and their protection, 3597z
harmful—
balance of species, 3574
control—
by electric current, 427
general, 1617, 1640q, 2671i, 3224
by repellents, 3573
by sound recordings, 2670f
damage to crops, 1617

Biuret determination, 2082
Biuret injury to plants, 712, 1000, 3384
Bixa orellana, 3933
Blackberry—*see also* Boysenberry—
  fruit, composition, 1510 l
  fruit size, growth substances affect, 2506
  giant Colombian (*Rubus macrocarpus*), 326g
  growing in various countries, 262, 1510o
  pests, 1578, 1615, 2652
  wild, control, 1951
Black currant—*see also Ribes*—
  breeding and selection, 267
  composition, fruit, 264, 2507, 3392, 3413
  composition, leaf, 3418
  diseases, fungus, 267, 386, 445f, 3522-3524, 3581
  fruit development, 3413
  fruit drop, 3412, 3414-3416
  growing in various countries, 326m, 1510s, 2558n
  nutrition, phosphorus, 2459
  pests, insects, 1600, 3580
  pests, mites, 1583, 3457, 3580
  physiology, photoperiodic responses, 194
  planting, spacing, 2507
  pollination, 2509, 3412
  propagation, vegetative, 2389, 2508
  pruning, 3417
  research at Long Ashton, 3411
  rootstocks, 2507
  soil management, cover crops, 1469
  spray injuries, 3580
  varieties, 270, 1280, 2503r, 3410
Blissus insularis, 3997
Bluebell polyploidy, 4031u
Blueberry—
  breeding, 265
  diseases, fungus, 1514, 3525, 3526
  composition, fruit, 263
  composition, leaf, 333
  flower bud differentiation, 1471
  growing in North America, 1510k, 2558k, 3456m
  growth phenomena, 1470
  nutrition, 332, 2511
  pests, insects, 3563
  pests, nematodes, 1640i
  propagation, vegetative, 2434
  seed treatment, 3420
  soil—
    management—
      irrigation, 3422
      mulching, 2511, 3423
      weed control, 2417, 3619
    micro-organisms, 2512
  varieties, 1274, 2510, 3409, 3419
Boehmeria spp—*see* Ramie
Bog plants and gardens, 975b
Bombax sessile, 854
Book reviews—*see* Reviews
Borassus aethiopum, 860
Borassus flabellifer, 1953, 2301
Borders, herbaceous, a book on, 2340g
Borneo, North, Rubber Fund Bd, A.R., 4255j
Boron—
  contents, seasonal variations, 2206
  determination, 1374s, 2415 l
  foliar application, 1693, 2549
  growth substances applied with, 2845
  interrelationships with other elements, 3059, 3137
  latex production in hevea affected by, 1186
  nutrition—
    a bibliography on, 1346
    of fruit and nut trees, deciduous, 316, 1468a, 1640b, 3461, 3462
    of fruit and plantation crops, evergreen, 1003, 1203, 1205, 2138, 2139, 2206, 2217, 2262, 3053, 3059, 3111
    of hops, 838, 1256, 1932
    of ornamentals, 955, 2002, 2994, 4019
    pollen germination affected by, 1422, 1425
    of small fruits, 1468a, 1640b, 2549, 2560, 3463, 3464
    sugar translocation affected by, 3283
    of tobacco—*see* Tobacco
    of vegetables, 675, 716, 1690, 1693, 2845, 3781
    water relations affected by, 3284
  sources, 2994
  tolerance and toxicity, 316, 3462
Boskoop Tree and Shrub Nursery exp. Stat., Yearb. and A.R., 3943
Botanic gardens, Singapore, A.R., 1285s
Botanical garden, Adelaide, A.R., 3243r
Botryodiplodia theobromae, 2201
Botryosphaeria ribis, 2590
Botrytis—
  allii, 546, 650, 2816
  cinerea, 272, 388-390, 572, 691, 903, 1034, 1261, 1264, 1640c, 1574, 1824, 1883, 1971, 3264, 3520, 3527, 3528, 4288
  fabae, 1633, 2656
  parasitica, 923
  spp., unspecified, 3457
  squamosa, 654
  tulipae, 2816
Bougainvillea—
  hybridization, 4016
  variegated, 947
  varieties, 4031j
Boysenberry—*see also* Blackberry—
  fruit, pectin metabolism, 1472
  fruit size, growth substances increase, 2506
  growing in Australia, 2558h
Brachiaria plantaginea, 1660
Brachycaudus helichrysi, 409
Brachytrupes membranaceus, 795
Bracken competition with heather, 1642
Bracken control, 1643
Braeobia—see Bryobia
Branching in plants, factors affecting, 42
Brassica(s)—*see also under* Crucifers *and individual crops*—
  juncea—see also Mustard—1324, 3602
  nutrition, minor element, 1690, 3723
  pests, 3729

Brassica(s) (*continued*)—
seed—
characters, 2866g
composition, 554
germination, 537
Brassolis spp., on coconuts and other palms, 2203
Brazil—
agricultural research institutes, 1289
crops, 852, 2948a, 3439
pests of fruits and vegetables, 1699
Breeding, plant—*see also* Fruit, Polyploidy *and individual crops under* breeding—
for disease resistance, 15, 16
flower emasculation, 2601
in Great Britain, 3694
X-ray aid—*see* X-rays
Bremia lactucae, 2864p
Brevicoryne brassicae, 732j, 2769
Brevipalpus—
inornatus, 879
lewisi, 2109, 4087
spp., unspecified, 4247
Brinjal—*see* Eggplant
British—
Columbia—*see also under* Canada—
agric. Statistics, A.R., 3234c
climate, 1285c
Dep. Agric., A.R., 2322
Guiana, crops, 1234j
Guiana, Dir. Agric., A.R., 4294b
West Indies centr. Sugar Cane Breed. Stat., Barbados, A.R., 1193
West Indies, citrus industry, 2070
Broccoli—*see also* Cauliflower—
composition, 263
diseases, 564, 1712, 2768
growing in various countries, 1837u
mutations, 1710
physiology, 2415u
phytoncides from, 570
propagation, vegetative, 556
seed treatment, 1686
soil management, irrigation, 1688
soil management, weed control, 488
varieties, 732t, 1838b
Bromeliads, water and nutrient uptake, 2022
Bromine in plant nutrition, 1690
Bromine toxicity, 4095
Bromus spp., control, 450
Brown rot diseases—*see Sclerotinia and host plants*
Bruchus—
lentis, 3208
obtectus—*see Acanthoscelides pisorum*, 2806
Brussels sprouts—
breeding and selection, 3695
climate, temperature responses, 1709
composition, 3716
growing in various countries, 552, 2865s
growth substance responses, 559, 1709
harvesting and packing, 568
nutrition, 2742
Brussels sprouts (*continued*)—
pests, 2769
soil management, irrigation, 2747
spraying machinery for, 2864e
varieties, 1838b, 3695
Bryn Adda Hort. Demonstr. Stat., N.A.A.S., 4294o
Bryobia praetiosa, 398, 1585-1587, 2626, 2671d, 3963
Bryophyllum, flowering stimuli, 3257
Bryophytes as economic plants, 3939z
Budding—*see also* Budwood, Grafting, *and separate plants under* propagation—
double-shield, 260n, 1412, 2438
Budding, histology of union in, 4039
Buddleia spp., propagation by cuttings, 953
Budwood, fumigation, 1255
Budwood, juvenile *vs.* mature, 968, 4195
Buildings, farm, 2314
Bulb(s)—*see also individual plants*—
carbon dioxide-oxygen pressure treatment, 974w
chemical treatments, 974z
climate, phenological data, 2958
diseases, 902
flower development, X-rays hasten, 1996
grades, standard, in the U.S.A., 901
growing in various countries, 3041g
lifting machines, 1995
planting machines, 1994, 2408, 4031p
research in various countries, 2951
soil management, weed control, 3600, 3633-3636
Bulbophyllum jacquetti, 4030r
Bulgaria, crops, subtropical, 1068v
Bulletin du Centre National de Recherches Scientifiques et Techniques, a new periodical, 1284
Bulrush control, 2737i
Burdocks, edible, 537
Bush fruits—*see* Small fruits
Butyrospermum parkii, 1949

Cabbage—*see also* Brassicas—
bolting, 560
breeding and selection, 529, 1837 l, 3695
Chinese, 1711, 1785
composition, 263, 545, 571, 2866t, 3315r
diseases—
bacterial, 1711
fungus, 2773, 3264, 3728
virus, 733i, 1785, 3726, 3727
growing in various countries, 552
growth, growth substances affect, 58, 555
growth, head formation, 526
labour requirements, 2762
nutrition—
bacterial fertilizers, 2743
fertilizer placement, 2742
foliar, 3719
manuring and major elements, 1689, 3704, 3719, 3720
minor elements, 1691, 1692, 3704
nutritional value, 571

Cabbage (*continued*)—
pests—
aphids (mainly *Brevicoryne brassicae*), 1687
brassica pod midge (*Dasyneura brassicae*), 3731
butterfly or worm (*Pieris* spp.), 1714, 1715, 2772
centipede (*Scutigerella immaculata*), 415
Crocidolomia binotalis, 567
diamond back moth (*Plutella maculipennis*), 567, 1714
fly, root (*Erioischia* spp.), 566, 1713, 2770, 2771, 3712, 3713, 3730, 3856x, 4288
looper (*Trichoplusia ni*), 1714
weevils (*Baris* or *Ceuthorhynchus* spp.), 3856x
physiology and metabolism, 2372, 2375, 3264
pollination, 2764
propagation by cuttings, 3717
seed—
production, 558
sowing depth, 2741
treatments, 555, 1686, 1687, 3701
seedlings, raising of, 541, 2743, 2763, 3703
soil management—
cultivation, methods compared, 3718
irrigation, 561, 2747
mulching, 1667
weed control, 488, 494, 1667, 1675a, 2707, 2708, 3651
spray residues, 1701
storage, 2773
varieties, 1837h, 3695, 3715
Cabinet for aseptic manipulations, 117m
Cacao—*see also* Cocoa *and Theobroma*—
bean—
composition, 1126, 1128, 1235g, 2305x, 4147
drying, 2191
fermentation, normal scale, 1235a, 1235v, 2191
fermentation, small scale, 4255u
fumigation, 2193
moulds, 3130
quality, 1127, 1128, 1235v
shape, variations in, 2183
washing, 2191, 2192
breeding and selection, 1092-1096, 1120, 1121, 1234h, 4254o
cherelle wilt—*see below*, fruit set and drop
climate, general, 2175, 2176
climate, rainfall, 3129
clonal seedlings, 4140
clones, 1109, 1234h, 2167-2170, 4139, 4140, 4146
composition—*see above*, bean, *and below*, fruit
diseases—
cause complex, rotting of cuttings, 2173
fungus—
bean moulds, 3130
black pod (*Phytophthora palmivora*), 1115, 1235g, 1235r, 2185, 2186, 4143, 4144
Cacao—diseases—fungus (*continued*)—
die-back (*Calonectria rigidiuscula*), 1123, 1235b, 4145
monilia pod rot (*Monilia roreri*), 1119, 2187, 2306c, 3129
witches' broom (*Marasmius perniciosus*), 1120, 1121, 3129, 4139, 4146, 4254o
general, in various countries, 3191w
insect-caused, false canker, 1122
non-parasitic, nutritional disorders, 1111, 1112, 2178
virus swollen shoot, 1115-1117, 1235j, 2184, 4142
virus vectors, 1115, 1118
field experiments, design, 1096
flowering, factors affecting, 1102
fruit—
husks (pod cases), uses of, 4149
morphology, 2183
pulp composition, 4148
set and drop, 1107, 2182, 2189, 4141, 4144
fruiting, periodicity in young cuttings, 1102
fumigation, tree, 1099
growing in West Africa and the Belgian Congo, 1093, 1234g, 2306x
growth—
growth substance responses, 1114
phases, 1102
regeneration, 2184, 2188
nutrition—
manuring and major elements, 1106, 1107, 1109, 1110, 1112, 4130
minor elements, 1111, 1112, 2178, 4130
shading effects, 1106, 1107
pests—
aphids (*Aphis* and *Toxoptera* spp.), 1235e
canker caused by, 1122
capsids (*Distantiella*, *Sahlbergella* and other spp.), 1115, 1123, 1124, 2188
general, 2153
mealy bugs—*see also above*, diseases, virus vectors—1099, 2189, 2190
membracids, 4144
nematodes, 2173
Orthocraspeda trima, 4130
scolytids (*Xyleborus morstatti*), 1115
thrips (*Selenothrips rubrocinctus*), 1125
physiology, 2180
planting—
methods, 1101, 2174
in old cacao soils, 1104
plastic or wax coatings to aid, 1100
spacing, 1107, 1109, 2174
pod—*see above*, fruit
pollination and pollen germination, 1113
production and trade, 1069, 1090, 2306t
propagation—
by cuttings, 1097, 1098, 2171-2173
fumigation of rooted cuttings, 1099
nursery practices, 1101
pruning, 2181
research—
in Central America and the West Indies, 1091, 1278, 2165, 2305f, 4279, 4280

Cacao—research (*continued*)—
in Ceylon, 2166
in the Far East and South Pacific, 1271, 4278
South America, 4256b
in West Africa and the Belgian Congo, 1265, 2163, 2164, 3215
rootstock-scion relationships, 1103
shading, 1102, 1104-1107, 1109, 2174, 2176, 2179, 2180
soil management, experiments, 1109
soil types, 1108, 2175
spray damage, 2189
tree ages, 2177
varieties—*see also above*, clones—1095, 2168, 2169
Cacoecia pronubana, 1976
Cacoecia rosana, 2649
Cacti—*see also* Succulents—
composition, 865i
culture, 927, 4031k
diseases, 928
taxonomy, 974k
as weeds and their control, 3682
Cactoblastis cactorum, 1648, 3682
Caesalpinia digyna, 3939k
Caffeic acid in plants, 780
Calcium—
contents of plants, factors affecting, 2077, 3057
cyanamide, as a herbicide—*see* Herbicides, cyanamide
cyanamide, as an insecticide, 430, 2864x
determination, 28, 2415n, 2416b, 3316b
foliar application, 2842
interrelationships with other elements, 947, 1001, 1065, 1182, 1184, 1349, 2077, 2261, 3043, 3137, 3287-3290, 4042, 4048, 4052, 4112, 4182, 4209, 4210
nutrition—
of fruit and nut trees, deciduous—*see also* Apple—219, 1065, 2146
of fruit and plantation crops, evergreen—*see also* Citrus *and* Sugar-cane—1153, 1182, 1184, 3043, 4112, 4130, 4183
leaf size affected by, 4049
of miscellaneous crops, 715, 830, 865r, 3866
ornamentals, 910, 2002, 4019
plant analysis as a guide to, 2259, 3052
of vegetables—*see also* Tomato—2744
radioactive, 4048
uptake by plants, factors affecting, 4048
Calendula—*see also* Marigold—2960, 3947
California—*see also under* United States—Dep. Agric., A.R., 1255
Caliroa limacina, 426, 1615
Calla—*see under Zantedeschia*
Callisto geminatella, 3561
Callitris spp., unspecified, 950, 1615
Callosobruchus chinensis, 1764
Calluna vulgaris, 1642
Calonectria rigidiuscula, 1123, 1235b, 4145
Calopogonium mucunoides, 1136
Calotropis procera, 3192h
Camellia—*see also* Tea—
air pollution affects, 2347
diseases, 3028
growing in various countries, 2053m
nutrition, 954, 955
pests, 2962
propagation, vegetative, 2037, 3026, 3027
soil pH requirements, 954
species and varieties, 2053n, 3042 l
Year Book, roy. hort. Soc., 2036
Cameroons Develop. Corp., A.R., 4272
Camphor basil (*Ocimum* spp.), 826
Campsis radicans, 3618
Canada—*see also individual provinces and exp. stats*—
crops—
fruit and nut trees, 1374k, 1377, 3315a, 3408f, 3408t, 4290
ornamentals, 975c, 3042r, 3315a, 4031e
small fruits, 1510k, 2558o, 3315a
vegetables, 533, 1374k, 3315a
Dep. Agric., Dir. Sci. Serv., A.R., 4294d
Maritime reg. Lab., Halifax, N.S., 1945
Minist. Agric., A.R., 2323
plant protection, 1622
weeds and their control, 1641, 2672, 2675, 3682, 3693m
Canarium mehenbethene, 1277
Canarium ovatum, 865n
Cannabis sativa—*see* Hemp
Canning—*see separate crops under* processing *or* products
Cantaloup—*see under* Melon
Canterbury, agric. Coll., N.Z., A.R., 2340c
Cape gooseberry, 3456h
Cape Verde Islands, crops, coffee, 3191v
Capitophorus fragaefolii, 1596
Capnodis tenebrionis, 2635
Capnodium citri, 1013
Capsicum—
composition, 263, 2860, 2864d, 3855h
diseases—
bacterial, 729, 730, 2862, 2863
fungus, 731, 3855c
general, 2865u
non-parasitic, 1835, 2859
virus, 1821, 2861
growing in various countries, 1837k
harvesting, 3850
nutrition, 1202, 1692, 1695, 1835, 2859, 3196
pests, insects, 1699, 1828
pests, nematodes, 3851
seed—
germination, 537, 1683, 1694
sowing direct *vs.* transplanting, 1834
storage, 1684
treatments, 728, 1685, 3855x
seedlings, raising of, 3703
soil management—
fumigation, 1257
irrigation, 1688, 2860
weed control, 488, 489, 505, 2719
varieties, 2864d, 2866o, 3855e

Carambola, 1232
Caraway (*Carum carvi*), 1904
Carbohydrates, metabolism and translocation, 2882
Carbohydrates in seeds, 4255n
Carbon—
  dioxide—*see also* Photosynthesis *and* Respiration—
    fixation, 1322
    -oxygen pressure treatment for bulbs, 974w
    radioactive—*see below*, radioactive
    for storage—*see* Storage, gas
  monoxide, plant responses to, 43, 1534
  radioactive, 30, 39, 916, 969, 1311, 1322, 1472, 1780, 2369, 2882, 3871-3875, 4099
Cardamoms (*Elettaria*, *Amomum* and *Aframomum* spp.), 803, 804
Cardia draba, 453
Carea arborea, 3858
Carex spp., control, 3621
Carnation—*see also Dianthus*—
  breeding and genetics, 1972
  diseases—
    bacterial, 889, 890, 1974, 4031r
    fungus, root rot and wilt (*Fusarium* and *Verticillium* spp.), 889, 1975, 2969, 2971, 3962
    fungus, various, 1975, 2969, 3222
    virus, 877, 2969, 3042n, 3222
  flowers—
    initiation and development, 887
    malformation, 2952
    packing and storage, 883, 891, 1977, 2952, 3960
    quality of cut, factors affecting, 883
  growing under glass or plastic, 3953
  growth, antibiotics affect, 1975, 3961
  mutations, 1972
  nutrition, 883, 1973, 2949, 3281, 4031c
  pests, insects and mites, 879, 1976, 2865r
  pests, nematodes, 4031r
  pinching, 887
  physiology—
    light responses, 888, 2952, 2969
    temperature responses, 2952
    transpiration, 2354
  plants, packing and storage, 880, 881
  propagation by cuttings, 1408, 2952, 2969
  soil—
    management, watering, 2969, 2970
    moisture requirements, 1973
    requirements, 2970
  soilless culture, 886, 2969
  spray injuries, 3961
  varieties, 885, 974a, 1972
Carnauba (*Copernicia cerifera*), 2203
Carob, growing in various countries, 1068o
Carotene—*see* Vitamin A
Carotenoids—*see under* Pigments
Carpocapsa pomonella—*see* Codling moth
Carpomyia vesuviana, 3122
Carpophilus humeralis, 3176
Carpophilus spp., unspecified, 1608
Carrot—
  breeding and selection, 3695
  composition, leaf, 3789
  composition, root, 2823
  diseases, fungus, 3791
  growing in various countries, 3856s
  mitochondria, 41
  nutrition—
    chlorides, 3705
    manuring and major elements, 1689, 1782, 2744, 3704, 3705
    minor elements, 666, 1690, 3704
    sodium and salt tolerance, 1692
  nutritional value, factors affecting, 544
  packing, 530
  pests—
    insects, fly (*Psila rosae*), 667-670, 1280, 2771, 3712, 3856q, 3856x
    insects, various, 3792
    nematodes, 2756, 3785
  physiology—
    anthocyanin synthesis, 1781
    photoperiodic responses, 1698, 3788
    respiration, 40
    temperature responses, 1698, 2824, 3251, 3788
    tissue culture, 40, 41, 55, 1326, 1781
  products, concentrated carotene, 3790
  root—
    shape, 2823
    splitting, 1782
    storage and pre-storage treatments, 669, 2824
  seed—
    germination, 537
    production, 2822
    sowing—
      dates, 1782
      depth, 2741
      rate and spacing, 664, 665, 1782, 2823
    storage, 538
    treatments, 667-669, 2771
  soil—
    management—
      fumigation, 4095
      irrigation, 2747
      soil conditioner responses, 80
      weed control, 493, 494, 1670, 2704, 2734, 3651, 3656, 3657, 3693i
    pH effects, 666
  spray injuries and residues, 548, 2864y
  storage—*see above*, root *and* seed
  varieties, 530, 3695
Carthamus tinctorius—*see* Safflower
Carum carvi, 1904
Cashew—
  diseases, 1231
  growing in various countries, 2300
  pests, 3185
  propagation, vegetative, 4251
  varieties, 1271
Casimiroa edulis, 3120
Cassia spp., polyembryony, 2038
Castilloa nicoyensis, 4199

Castor (bean)—
diseases, 3922
fruit abnormality, 865u
fruit ovule number, yield in relation to, 3922
growing in various countries, 855, 2306h, 3939p
harvesting machines, 2943
marketing, 3923
maturity, herbicides to induce, 3920
planting, spacing, 3921
physiology, enzyme activity, 2948b
production and trade, 1263
products, oil, 1948, 1954s
seed—
composition, 857, 2948k
germination, 857, 865c, 2948b
hulling machines, 2943
hulls, composition, 3924
storage, 3923
treatments, 3922
soil requirements, 3922
varieties, 856, 1276, 2942, 3920
Casuarina spp.—
dye from, 1917
root nodules, 2039
as windbreaks, 2225
Catalpa bignoniodes, 945
Cattleya orchids—*see also under* Orchids—2021, 3042m
Cauliflower—*see also* Brassicas *and* Broccoli—
breeding and selection, 3695
climate, sunburn, 569, 1716
composition, 562, 2744, 3722
diseases, fungus, 1712
diseases, virus, 565, 3700, 3726
growing in various countries, temperate, 1837u
growing in various countries, tropical, 2864w, 4129
harvesting, 569
labour requirements, 2762
nutrition—
manuring and major elements, 2744, 3704, 3722
minor elements, various, 3704
molybdenum, 563, 1691, 3721-3725
packing, 1716-1718
pests, 415
physiology, 3721
propagation, vegetative, 3717
seed production, 557, 3856d
seed treatment, 1686
seedlings, raising of, 3702
soil management, weed control, 494, 2707
varieties, 553, 732f, 732t, 1269, 1838b, 3695
Cawthron Inst., N.Z., A.R., 1256
Ceanothus species and hybrids, 4031m
Cedar wood oil, 1277
Ceiba pentandra, 828, 1657
Celeriac—
irrigation, 2747
nutrition, 1690
pests, 2774, 2775
varieties, 573, 732a
Celery—
blanching, 3732
composition, 1719, 2744, 3733
diseases, fungus, 572, 1720, 1721, 2776
diseases, resistance, 2866p
growing under glass, 1837d
harvesting, 3734
nutrition, manuring and major elements, 2744, 3209, 3704, 3733, 3801
nutrition, minor elements, 1719, 2745, 3704, 3733, 3856r
packing, 530
pests, nematodes, 2756
planting, spacing, 3801
seed germination, 537
seed storage, 538
soil management, weed control, 494, 3658
spray injury, 2754
spray residues, 733g
varieties, 530, 2866p
Cellophane flakes, waste as a fertilizer carrier, 2960
Cell(s)—
culture of, 1285u
physiology, 41, 2982
stages in the freezing of, 1530
stone, in fruits, 2306m
Cement dust, plants injured by, 3710
Cenchrus tribuloides, 2702
Centaurea cyanus, 849
Centaurea spp., weed, 453
Centella asiatica, 4238
Centrococcus insolitus, 3853
Centrospora acerina, 572, 2975
Cephalostachyum pergracile, 864
Cerastium vulgatum, 472
Ceratitis capitata, 407, 418, 1076, 1603, 2104, 2105, 2641, 3086, 3554, 4085
Ceratitis rosa, 2642
Ceratostomella fimbriata, 1189, 4255s
Cercis siliquastrum, 2053a
Cercospora—
elaeides, 3153
fuligena, 1825
mercurialis, 1645
musae, 1235s, 4134
nicotianae, 782, 1891
spp., unspecified, 1720, 3154
Ceresa bubalus, 1601
Ceroplastes—
destructor, 2120
helichrysi, 3224
rubens, 1015
rusci, 3567
Certification schemes for plant material, 135, 359, 2573, 3082, 3531
Cestrum nocturnum, 4031 l
Ceylon—
agriculture in, 2306b, 2306n
cacti and succulents in, 4031k
Coconut Res. Inst., A.R., 2194
crops, plantation, 2166, 2305u
Dir. Agric. Administ., A.R., 1257
Chaenomeles lagenaria, 125

Chaenomeles spp., forcing, 2032
Chamaecyparis lawsoniana, 2053y
Cheimatobia brumata—*see Operophtera*
Chelates—*see also* Iron *and* Manganese—
  as growth substances, 3268
  in plant nutrition, 90, 91, 117a, 2360, 3471, 3597m
  wilt toxins in plants act as, 1820, 2854
Chenopodium album, 2706, 3661
Chenopodium quinoa, 733j
Cherry—
  blossom—*see below*, flower
  breeding and selection, 126, 131, 2422
  climate, spring frost injury, 345
  climate, winter injury and hardiness, 1529, 3349, 3477, 3478
  composition, fruit, 2503t, 3392, 3408c
  composition, leaf, 1546
  diseases—
    bacterial canker and leaf spot (*Pseudomonas* spp.), 2670g, 3497
    fungus—
      blossom blight (*Sclerotinia* spp.), 382, 2659, 3348
      Cylindrosporium spp., 381
      fruit rots (various organisms), 3520
      leaf spot or anthracnose (*Coccomyces hiemalis*), 380, 3521
      mildew (*Podosphaera oxyacanthae*), 380
      wilt (*Verticillium* spp.), 2603
    non-parasitic, 2502
    virus, 359, 445m, 1513, 1538, 1542-1546, 1640s, 2573, 2577, 2671w, 2671x, 3597c, 3598e
  flower, bud differentiation and development, 183, 3252
  fruit—*see also above*, composition, *and below*, packing *and* storage—
    cracking, 3520
    drop, 340
    malformation, 445y
  fruiting, ringing advances, 3362
  growing in various countries, 3321
  growth, herbicides affect, 1652
  hybrids, 3349, 3408c
  leaf abnormalities, 3475
  leaf composition, 1546
  mutations, 131
  nutrition—
    foliar, 3384
    manuring and major elements, 3384
    minor elements, 219
  packing, 3228
  pests—
    aphids, 1621
    birds, 2670f
    borers (*Xyleborus dispar*), 2639
    fruit flies (*Rhagoletis* spp.), 441, 1604, 1605, 2643, 2670h, 2671p, 3554, 3555
    fruit worm (*Grapholitha packardi*), 3563
    nematodes, 2670x
    Rhynchites auratus, 3552
    sawflies (*Neurotoma nemoralis*), 3565, 3566
    slugworms (*Caliroa* spp.), 426, 1615
Cherry (*continued*)—
  planting, orientation, 1436
  plum—*see Prunus cerasifera*
  pollination, 172, 3354, 4281
  propagation—
    by cuttings, 1408, 2436
    of disease-free material, 2573
    by layering, 2435
  pruning, 2503p, 2504c
  ringing, 2435, 3362
  root systems, 2445
  rootstocks—
    hardy, 3478
    mahaleb, 2445, 3348
    mazzard or sweet (*Prunus avium*), 3348
    as nurse roots, 2436
    sour (*Prunus cerasus*), 3349
    in various countries, 2503q
    virus-free, 2573
  seed embryo culture, 145, 146
  seed germination, 146, 2432
  soil—
    management, irrigation, 3386
    management, weed control, 2690, 2691
    types, 219
  spray residues, 2671 l
  storage, gas, 2500
  transport in water, 3408h
  varieties, 260p, 270, 1393, 1405, 1468k, 2503e, 2503r, 2573, 3408s
Cheshunt exp. Res. Stat., A.R., 4294e
Chestnut—
  breeding, 2555
  Chinese water, 3855k
  composition, leaf, 2053y
  diseases, fungus, bark canker or blight (*Endothia parasitica*), 1505, 2555
  diseases, fungus, ink disease (*Phytophthora* spp.), 1505
  growing in various countries, 2555
  pests, 424, 1015
  propagation, vegetative, 317-319
  research in France, 1505
  root mycorrhiza, 319
Chickweed—*see Stellaria media*
Chicory—*see also* Endive—
  forcing, 686
  growing in various countries, 805, 1789, 2864u, 3226
  root characters, 2948q
Chilli—*see under Capsicum*
Chilling requirements of tree fruits—*see* Dormancy prolonged *and under* Temperature
Chilotraea infuscatella, 4228
Chimaeras—*see under* Mutations
China grass—*see* Ramie
China, medicinal plants of, 3939r
Chinese—
  cabbage—*see* Cabbage
  gooseberry—*see under Actinidia*
  water chestnut, 3855k
Chipping Campden Fruit Veg. Canning Quick Freez. Res. Ass., A.R., 1285f

Chlorate, plants injured by, 3957
Chlorella spp., culture for fodder, 861
Chloride—*see also* Salts—
determination, 117e
as a plant nutrient, 761-763, 1863, 1864, 4112
in plant secretions, 1987
plants injured by, 830, 2225, 3066, 3705
vs. sulphate ions in plant nutrition, 3705
Chlorinated water, disease control by, 1770
Chlorine, plant responses to, 1534
Chlorine, seed treatment with, 3420
Chlorogenic acid and related compounds in plants, 118b, 780, 802p
Chlorophyll—*see also* Pigments—in plants, 802u, 1445, 2449, 4188
Chlorosis—*see also* Iron *and individual plants under* diseases, non-parasitic, *and* nutrition—
causes of, 1165, 3220
leaf composition and, 333, 947
lime-induced, plant reactions to, 1111, 3469
soil fungi induce, 3084
Chortophila brassicae—see Erioischia
Chortophila cilicrura—see Delia
Chromaphis juglandicola, 1595, 2632, 2633, 3544
Chromatographic methods in plant chemistry, 27, 2316, 2864r
Chromium as a plant nutrient, 308, 2058
Chromosome atlas of flowering plants, 4258
Chrysalidocarpus lutescens, 2054a
Chrysanthemum—
cinerariaefolium—see Pyrethrum
climate—*see also below*, physiology—frost resistance, 2972
cytology, 974u, 4030j
diseases—
bacterial, 1980, 3967
fungus, 1975, 1981, 3516, 4132
general, 1697
virus, 974m
flower—
bud initiation and development, 892, 1979, 2949
forcing, 893, 3042r
packing and storage, 883, 3960
spray formation and quality, factors affecting, 883, 3965, 3966
growing under glass or plastic, 3953, 3964
growing in various countries, 3042r
growth, growth substances affect, 1979
hot water treatment, 2410
nutrition, 876, 883, 892, 2949, 2959, 3209, 3281, 3956
pests—
insects, 1697, 3968
mites, 1982
nematodes, 2974
physiology—
enzyme activity, 2372
light intensity responses, 892, 1979, 2973
photoperiodic responses, 870, 874, 893, 2372, 2973, 4030x
respiration, 3261
Chrysanthemum—physiology (*continued*)—
temperature responses, 892, 947i, 1979, 2973, 3966
water relations, 1978
pinching, 3965
propagation by cuttings, 871, 1408, 3802, 3965
research in Germany, 870
seed germination, 537
soil management, weed control, 2974
varieties, 537, 893, 1280, 2950, 2972, 3209, 3944, 3964
Chrysomphalus aonidum, 1019
Chrysopa spp., predators of scale insects, 4123
Cider—
apple—
growing on bush trees, 177, 178
growing in various countries, 3408o
propagation, 3346
varieties—*see* Apple varieties
composition and quality, 178
Cinchona—
production and trade, 1069
quinine contents and yields, 1129
research in various countries, 4278
Cineraria, herbicide injury, 3957
Cineraria nutrition, 2959
Circulifer tenellus, 619, 3714
Cirsium arvense, 523q, 2737g
Cissampelos pareira, 2915
Cistus spp., flower drop, 4030z
Citronella—*see Cymbopogon*
Citrullus spp., cytotaxonomy, 1837p
Citrus—
acida var. *variegata*, 4031i
breeding, 983, 3069
by-products—*see below*, products
climate—
air pollution, 1007, 1008, 2092, 3078, 3248, 4128o
drought responses, 1005
frost—
damage, 4067
protection by fans, 2091
protection methods, general, 4068, 4069
resistance, 984, 4066
micro-, 4125
spray injury affected by, 3083
temperature responses, 1070, 3067, 3068, 3119q, 4065
composition—
analytical methods, 2126, 3119s
flower, 4057, 4059
fruit—
factors affecting—
nutrition and water supply, 1001, 2090
rootstocks, 4038
sprays, 1006, 3094
various, 995, 1006
general, 2126, 3264, 4097, 4128h, 4128m
grapefruit, 2090, 3059, 3094, 4096
lemon, 1001, 2127, 3064, 3391, 4049
mandarin, 3095

Citrus—composition—fruit (*continued*)—
orange, 995, 1006, 1025, 2127, 3058, 3096, 3097, 3391, 4038, 4049, 4097
leaf—
factors affecting, rootstocks, 1003, 2077
factors affecting, various, 994, 4043, 4044
general, 29, 1007
grapefruit, 3059, 4042
lemon and lime, 4045, 4049, 4052
mandarin, 994, 998
orange, 998, 2081, 2087, 3062, 4042, 4047, 4049, 4052, 4095
pest resistance related to, 1022
root, 4049, 4070
shoot, 4056
diseases—
cause uncertain—
bud union disorders, 1009
decline and sieve-tube necrosis of sour orange, 2096
decline of tangerines in Mexico, 4128c
hard fruit, 2095
leaf spot of grapefruit, 1011
lignocortosis or wood pocket of lemons, 3079
phloem discoloration, 4128b
sloughing, 1033
fungus—
blue and green moulds (*Penicillium* spp.), 1034-1036, 1038, 4106, 4127y
fruit storage rots, general, 1034, 1035, 1037, 2122, 4101, 4102, 4105, 4109
gummosis, tip blight and brown rot (*Phytophthora* spp.), 983, 1012, 2125, 3083, 4110
mal secco (*Deuterophoma tracheiphila*), 2099, 4083
melanose and stem-end rot (*Diaporthe* (*Phomopsis*), *Diplodia* spp., etc.), 1031, 1034, 1035, 2100, 2125
sooty mould (*Capnodium citri*), 1013
Thielaviopsis basicola, 3084
wither tip, anthracnose, leaf blight and fruit rot (*Colletotrichum gloeosporioides*), 4031i, 4060, 4084
general, in various countries, 1068b, 2098, 2148k
nematode caused, spreading decline, 4127a
non-parasitic—
chloroses—*see also below*, nutrition, iron, zinc, etc.—3078, 4128o
foliocellosis or mottle-leaf, 2148q
fruit breakdowns, 4100
puffiness, 4041
virus—
general, 1255
psorosis, scaly bark, lepra explosiva or leprosis, 4072, 4127s, 4128c
scalybutt or exocortis, 4071
seedling yellows, 3080
tristeza, quick decline, stem-pitting and root-rot, 983, 1010, 2097, 4073-4080, 4127f, 4127h, 4127i, 4128g
Citrus—diseases—virus (*continued*)—
xyloporosis, cachexia or little leaf, 1010, 3081, 3082, 4080-4082, 4128c
economics, 2102, 4128 l
flower(s)—
bud initiation and development, 991, 3068
drop, 4059
growth substances in, 4057
pistil development, 4056, 4059
thinning, 992
flowering date, factors affecting, 1073
flowering by young seedlings, 3069, 3070
frost—*see above*, climate
fruit—*see also above*, composition, *and below*, harvesting, packing, products *and* storage—
anatomy, 2075
bagging, 1025
carbon dioxide fixation by, 4099
characters, position on tree affects, 995
colour, factors affecting, 1025
colour measurement, 4127u
drop, factors affecting, 3058, 3074, 4060, 4061
drop, growth substances retard, 1024, 3075, 3076, 3077, 4062
electrical potential, 3064
enzymes, 4128h
forcing, 3064
fumigation, 3086, 3087
injury—
chelates cause, 2085
detection of, 3098
harvesting and handling cause, 4108
inoculation, 1038
maturity, sprays affect, 2098, 2111, 3094, 4096
maturity tests, 3391, 4096
morphology, 2075
pigments, 3097, 4127u
quality—
factors affecting—
nutrition, 3055, 3058, 4042
rootstocks, 4038
sprays, 1006, 1016, 2111, 4093
various, 1025, 2122
seasonal changes, 4096
respiration, 1008, 1026, 2122, 3246, 4104
set, factors affecting, 993, 2093, 3053, 3058, 3073
size, factors affecting—
growth substances, 1006, 2093, 3076
nutrition, 1001, 1002, 3055, 3056
various, 1006, 1014, 3056
thinning, 992
yields, root weight correlated with, 990
yields, various factors affecting, 986, 987, 1014, 4036, 4065
fruiting, biennial, 3059, 3072
fruiting, leaf composition affected by, 994
fumigation—
fruit, 3086, 3087
soil—*see below*, soil management
tree, 1004

Citrus (*continued*)—
grading—*see below under* packing
growing in—*see also below*, research *and* varieties—
Australia, 3119k
Europe, 2148a, 2148 l, 2148m, 2148o, 2148p
the Far East and South Pacific, 4128n
India, 2310
the Near East, 4035
North Africa, 2148g, 3119d
South Africa, 4128f
South America, 4127c
the West Indies and Central America, 2070, 2148b
growth—*see also below*, physiology—
bark anatomy, 2073
dormancy, 4066
habit, rootstocks affect, 4038
rhythm, 989
root—*see below under* root
shoot anatomy, 991
soil fungi affect, 3084
substances, natural, in, 4057
substances, responses—*see also above*, fruit drop, *and* fruit size, *and below*, leaf abscission *and* storage life—of trees, 2094, 3075, 4066
hanajuzu, 1022
harvesting, 1026, 1027, 1068r, 2125, 3098, 4108
hybridization, vegetative, 3119 l
hybrids, 982
junos, 1022, 3067
leaf—*see also above*, composition—
abscission, factors affecting, 4059
albinism, 2078
area, factors affecting, 4043, 4049
cuticle, 2378
defoliation, flower development affected by, 4056
leiocarpa, 982
natsudaidai, 1022
nutrition—
biuret injury, 1000, 2082
boron, 1003, 3053, 3059
calcium, 1001, 2077, 3043, 3054, 3057, 4042, 4048, 4049, 4052
cations in relation to, 2077, 3057, 4048
chlorides, 3066
cobalt, 3058
copper, 2083, 2098, 3058
foliar, 976, 999, 1002, 1004, 2082, 3058, 3061, 3070
iron, 2080, 2084, 2085, 3058, 3060, 4050, 4051
leaf and soil analysis as guides to, 3052, 4042-4044, 4054
magnesium, 1002, 2077, 2086, 2087, 2098, 3280, 4042, 4053
manganese, 1004, 2083, 3058, 3061, 4053
manuring, general—*see also below*, soil management—307, 996, 1002, 4041, 4043
Citrus—nutrition (*continued*)—
manuring, of lemons, 4045
molybdenum, 2088, 2866c
nitrogen, 997-1000, 2079-2081, 3053-3055, 4042, 4046, 4059
nutrient absorption by various tree surfaces, 2079
phosphorus, 2079, 3070, 3280, 4041, 4044, 4047
potassium, 1001, 2077, 2087, 2125, 3043, 3053, 3056, 3057, 3070, 4042, 4048
silicates, 3282
sodium and salt tolerance, 3066, 4052, 4070
sulphate toxicity, 4052
by tree or leaf injection, 2084
zinc, 1002, 1004, 2083, 2089, 2098, 2148q, 3058, 3062, 4053-4055, 4059
orchard survey methods, 4127z
packing—*see also below*, storage—
containers—
boxes and cartons, 4103
bulk, 1029, 1068j
packaging bags, 1068e
grading, regulations, 1068f
grading, sizing equipment for, 2121
methods, 1028, 1068c, 1068e, 1068r, 1068u, 1068w, 4098
pests—
ants, 2102
aphis (*Aphis*, *Toxoptera* and other spp.), 1014, 1997
black fly (*Aleurocanthus woglumi*), 2103, 4127t
control, biological and ecological—*see also below*, scales control—2101, 3092, 3119e, 4091
control, general, 1699, 2148k, 3119c
fruit flies (*Anastrepha*, *Ceratitis* and other spp.), 2104, 2105, 3086, 3087, 4085, 4093, 4127t
hesperiid caterpillars (*Achylodes papinianus minor*), 4086
leaf hoppers (*Empoasca* spp.), 2106
mealy bugs (*Pseudococcus* spp.), 2117, 2118
mites—
brevipalpus or flat (*B. lewisi*), 2109, 4087
bud (*Aceria sheldoni*), 1017, 2107, 2109
general and unspecified, 1016, 2098, 2101
red or purple (*Metatetranychus citri*), 1018, 2108, 2109, 3088, 4088
rust or Maori (*Phyllocoptruta oleivora*), 1019, 2109, 3091, 4055, 4089
six-spotted (*Tetranychus sexmaculatus*), 2108
Tenuipalpus pseudocuneatus, 4072
Tetranychus telarius, 1020, 2107
yuma (*Tetranychus yumensis*), 2109
nematodes, 2112-2115, 3085, 3119f, 3119m, 4094, 4127a
Neocleora tulbaghata, 3224
psylla (*Diaphorina citri*), 3089, 4090, 4091

Citrus—pests (*continued*)—
rodents, 3119n
scales—
arrowhead (*Unaspis yanonensis*), 1015, 1022
camphor (*Pseudaonidia duplex*), 1015
control, biological, 2101, 2116, 4093, 4131
control, chemical, 1016, 2098, 2117, 4093
cottony cushion (*Icerya purchasi*), 4131
Florida red (*Chrysomphalus aonidum*), 1019
Parlatoria camelliae, 2117
Pulvinaria aurantii, 1015
purple (*Lepidosaphes beckii*), 1019, 2117, 2118
red (*Aonidiella aurantii*), 1021, 2119, 3090, 4092, 4093
wax (*Ceroplastes* spp.), 1015, 2120
yellow (*Aonidiella citrina*), 1021, 3090
snails, 3093
in various countries, 1699, 2148k, 3119c
white flies (*Aleurocanthus spiniferus*), 3092
physiology—
light and shade responses, 3068
respiration—*see above*, fruit
of roots, 2077, 4048
water relations, 1005, 1006, 3056, 3064, 4063, 4064
planting—
mechanical, 4127r
methods, 4127x
in old citrus soils, 2076
spacing, 986, 4036
pollination—
by bees, 3073
in the bud stage, 993
pollen germination, 4058
polyembryony, 2078, 3048
production and trade—
European and Mediterranean, 2148f, 2148g, 4128i
South African, 1293
world, 979, 2148t, 2148u
products and by-products—
fodder, 4128m
juice—*see also above*, *under* composition, fruit—1232
oil, 1919, 2148b
various, 1068p, 4105, 4128i
propagation—*see also below*, rootstocks *and* seed—
bud union anatomy, 4039
budwood certification, 3082
cuttings, 985, 3049
nursery methods, 984
vegetative hybridization, 3119 l
pruning, 987, 1068i, 3065, 3119g
research—
in French West Africa, 3217
in South Africa, 3221, 4127w
in Trinidad, 1278
ringing, 3071, 4056

Citrus (*continued*)—
roots—
bark ontogeny, 2073
cation-exchange capacity, 3057
depth, factors affecting, 3063
growth, 989, 990, 2080
physiology, 2077, 4048
rootstocks—
chlorosis affected by, 1009, 4050
frost resistant, 984
for grapefruit, 3051, 4040, 4050
leaf composition affected by, 1003, 2077
for lemons, 1009, 3050
nucellar seedlings produced by, 3048
for oranges, 997, 4038
replant problems and, 2076
-scion incompatibility, 1009, 4039
trifoliate orange, 2078
Troyer citrange, 1009
scion rooting induced, 4128g
seed—
characters, 980
germination and testing, 2078, 4037
numbers, factors affecting, 993
storage, 2078
treatments, 4037
soil(s)—
compaction, 3119h
fungus flora, 3084, 3119m
management—
clean cultivation, 2080
cover cropping, 2072, 4094
fumigation, 988, 3119m, 4095
irrigation, 988, 996-998, 1006, 2090, 3064-3066, 4061
methods compared, 997, 2071, 2081, 4043, 4044
mulching, 988
weed control, 2722
moisture conditions in Florida, 2148x
pH, factors affecting, 3054, 3055
temperature responses, 989
water tables, 3063
species in the Far East, 3119i
species, ornamental, 4031i
spray(s) (ing)—
costs, 2102
coverage, 1068g
fruit maturity or quality affected by—*see above*, fruit
injuries, 1016, 2094, 3083
machines for, 1023
programmes, 1068b, 2098, 3597o
residues, 1631, 2110
storage—*see also above*, packing *and* seed—
ammonia gas treatment, 4109
in carbon dioxide enriched atmosphere, 4099
cooling methods for, 1032, 2122, 2123
dips and coatings, 1036, 1037, 2125, 3100, 4100-4103, 4105, 4106, 4128a
disorders—*see also above*, diseases, fungus—sloughing, 1033

Citrus—storage (*continued*)—
ethylene for colouring, 1030, 2148w
ethylene damage, 1031, 1033
gas, 4099
heat storage capacity and conductivity coefficient of fruit in, 2124
life, 2,4-D and 2,4,5-T affect, 4101
life, various factors affecting, 1031, 1032, 2125, 4100
metabolism—*see also above*, fruit respiration—4099
nitrogen trichloride gas treatment, 4102
rots—*see above*, diseases, fungus
temperatures, 260y, 2125, 4100
wraps, 3099, 4101, 4102, 4104
transport, 1029
tree age, yield in relation to, 4036, 4065
varieties—*see also above*, growing *and* species, *and individual Citrus species*—
general—
collections, 2148r
seed characters, 980
in various countries, 3119i
graft hybrid, 982
lemon, nucellar strains, 4127m
mandarin, 2074
orange—
Lue Gim Gong and Valencia compared, 2075
nucellar strains, 3119a
Washington Navel, 981
Cladosporium—
cucumerinum, 583, 2781, 3741
effusum, 2615, 2670e
fulvum, 691, 1280, 2405, 2781
herbarum, 1013
spp., unspecified, 1565, 3533
Clasterosporium carpophilum, 385, 1560, 2660
Clematis propagation, vegetative, 4017
Cleppa Park Hort. Demonstr. Stat., N.A.A.S., 4294o
Clianthus formosus, 3041j
Clidemia hirta, 3682, 3683
Climate—*see also* Drought, Frost, Hail, Meteorology, Sun, Wind *and individual crops under* climate—
adverse, insurance of crops against, 1234o
of Canada, 1285c
micro-—
of annual crops, 765
under cloches, 540
in glasshouses—*see* Glasshouse
on slopes, 1390, 4125
of trees and bushes, 2450
of vineyards, 291, 2343
phenological records in various countries, 1430, 2958, 3041w
plant responses to, 351, 974t, 1960, 2415y, 2765, 2767
rainfall—
artificial stimulation of, 1299, 2246
biennial bearing related to, 1064
crop composition affected by, 2870
crop yields in relation to, 4168
Climate—rainfall (*continued*)—
expectation, calculation of, 1300, 2341
weather forecasting, 1297
Clitocybe tabescens, 1047
Clitoria ternatea, 975h
Clivia nobilis, 2378
Cloches, crop cultivation under—*see also* Plastic covers *and separate crops*—2340j, 2749
Cloches, microclimate under, 540
Clove anatomy, 1131
Clove growing in various countries, 1130, 1234w
Clover control in lawns, 479, 482-484, 3625
Clover, subterranean (*Trifolium subterraneum*), 311, 3388
Clubroot—*see Plasmodiophora brassicae*
Cnephasia wahlbomiana, 2761
Cob nut—*see under Corylus*
Cobalt—
growth substance response enhanced by, 3285
in plant nutrition, 1306, 3058
radioactive—*see also* Gamma irradiation—1700, 2359
Coccinella septempunctata, 4091
Coccomyces hiemalis, 380, 3521
Cocculus spp., propagation, 2434
Coccus hesperidum, 2962
Cocoa—*see also* Cacao—
Conference, London, Rep., 2162
Res. Inst., American, work at, 2165
Res. Inst., W. Afr., A.R. and work at, 2163, 2164
Coconut—
breeding and selection, 1278, 2196, 4151
button shedding—*see below under* nut fall
Conference, Ceylon, Proc., 2195
diseases—
cause uncertain, 2199-2201, 3134
fungus, 2194, 2201
nematode causes, 1278
economics, 2198, 4150
flower abnormalities, 3191 l, 4255d
growing, mechanization of, 4256d
growing in various countries, 2305k, 2306b, 2306h, 3131
growth, abnormal, 2305v, 4152, 4254n
nurseries, 1132
nut—*see also below*, seed—
fall, 1138
harvesting frequency, 2194
milk (water)—
growth substances from, 55, 1342
properties of, 3133
for tissue cultures, 3816
morphology, 2196
nutrition, 2194, 2195, 2198, 3134, 3230, 3234t
pests—
caterpillars (*Brassolis* and *Nephantis* spp.), 2202, 2203
cockchafer (*Leucopholis coneophora*), 1139, 2202
nematodes, 1278

Coconut—pests (*continued*)—
rhinoceros beetles (*Oryctes* and *Strategus* spp.), 1140, 2202, 4130
in various countries, 2153, 2202
weevils (*Rhynchophorus* spp.), 2202
physiology and metabolism, 3133
planting, 1132, 3132, 3230
production and trade, 1069, 2305k
products—
coir, 828
copra, 1141, 4153, 4154
oil, 1263, 4153, 4154
vinegar, 1257, 2194, 2195
propagation by marcotting, 1137
research in Ceylon, 1257, 2194, 2305j
research in Malaya, 1271
roots, aerial, 1137
seed—*see also above*, nut—and seedling selection, 1132, 1135, 2194, 2195, 2306g
seed storage, 2194
shading, 2306k
soil—
conservation, 4255i
management, cover crops, green manures and grass, 1136, 2306k, 4255c
management, intercropping, 2909, 3230
water table, responses to, 2201
varieties, 1133, 1134, 2197, 2200
Codling moth, control, chemical, 406, 407, 420 421, 441, 1583, 2645-2647, 2671c
Codling moth, time of emergence and warning services, 1611
Coffea—see also Coffee—
canephora (robusta coffee), 1144
lebruniana, 2305q
spp., seed abnormalities, 4156
Coffee—*see also Coffea*—
beans—*see also below*, processing *and* seed—composition, 2206, 3192o, 4255n
Board, Indian, A.R., 2204
a book on, 4257
breeding and selection, 1234d, 3192p, 4156-4163, 4254i
by-products, 2211
climate, frost or cold injury and protection, 1234b, 4169
climate, rainfall, 1145, 4168
composition—*see above*, bean, *and below*, fruit
diseases—
fungus—
berry disease and die-back (*Colletotrichum coffeanum*), 1148, 4170, 4171
rust (*Hemileia vastatrix*), 2208, 3192a, 4291
stem rot (*Fomes* sp.), 1149
tracheomycosis (*Gibberella* (*Fusarium*) *xylarioides*), 3139
general, in various countries, 1151, 2306q
non-parasitic, 3137
economics, 3135
flowering, factors affecting, 4167
fruit—
anatomy, 2305z
Coffee—fruit (*continued*)—
composition, 2206, 2211
seedless loculi in, 4156-4161
yields, recorded and forecast, 1143, 4168
growing in—
Central America and the West Indies, 1235u, 2305d, 3191e
Ceylon, 2305u
East and Southern Africa, 1235i
the Far East and the Pacific, 3192m, 3192n
the Middle East, 3192 l
South America, 1262
West and Central Africa, 1234 l, 2306x, 3191v
leaf anatomy and morphology, 1144
nutrition—
foliar, 2207, 3138
leaf analysis a guide to, 2206, 3136, 3192b
manuring and major elements, 1147, 1202, 2205, 2206, 3136, 3196, 3234t, 4255e
minor elements, 1147, 2206, 2207, 3136-3138
pests—
antestia bugs (*A. faceta* and *A. lineaticollis*), 4291
ants, 4173
Dalcera abrasa, 1150
general, in various countries, 1151
leaf miners (*Leucoptera* or *Perileucoptera* spp.), 4172, 4254a
mealybugs (*Pseudococcus* and other spp.), 2209, 4173
millepedes (*Orthomorpha coarctata*), 2210
snails, 4175
stem borer (*Anthores leuconotus*), 1234v, 4174
physiology, photoperiodic responses, 4167
physiology, water relations, 4167
planting, methods, 1234d
pollen, abnormal, 4158
processing—
drying, 3140
factory for, 3141
fermentation and washing, 4176
production and trade, 1069, 1142, 4254p
propagation by cuttings, 4166
propagation, nurseries, 1234d
pruning, 1234b, 1234s
research in—
the Belgian Congo, 1265
Costa Rica, 4279
India, 2204
Indonesia, 4278
Kenya, 3219, 4283
Malaya, 1271
Tanganyika, 3230
seed—
abnormalities, 4156
drying, 4164
endosperm anatomy, 4254e
treatment with X-rays, 4165
shade, rainfall distribution under, 1145

Coffee (*continued*)—
soil—
conservation, 1146, 2152
management—
cover crops and green manuring, 1146, 2305b, 3136
cultivation, 3136
irrigation, 3136
mulching, 1147, 2205, 3136
weed control, 2723, 3136
types, 2206
spray injury, 4170
varieties—
in Brazil, 4155
conuga, 3135
seedling arabica, 4162, 4254i
seedling robusta, 4291
variegated, 4163
Coir—*see* Coconut products
Cola spp.—
destruction with herbicides, 1657
nut storage, 2302, 2303
pod composition, 2948s
in West Africa, 3191h
Colaspis brunnea, 408
Colchicine—
seed germination stimulated by, 3421
treatment—
of fruits, 2422, 3192g
of miscellaneous crops, 833, 834
of ornamental plants, 2053w, 2422, 2967, 2981
of vegetables, 641, 673, 696, 2422
Coleus, flower abscission, 4031s
Coleus, leaf abscission, 49, 2382, 2383
Colletotrichum—
atramentarium, 3842
circinans, 655
coffeanum, 1148, 4170, 4171
gloeosporioides, 1034, 4031i, 4060, 4083, 4084
lagenarium, 1731, 2659
lindemuthianum, 596, 625
phomoides, 724, 2852
spp., unspecified, 3883
tabacum, 784, 3882
Collops vittatus, 1736
Colombia, crops, 2148u
Colombia, Institute for Promotion of Tobacco Growing, research programme, 1841
Colorado beetle on solanaceous crops, 2864x
Colour—*see also* Pigments—charts, horticultural, 9
Colour, measurement, apparatus for, 326k
Commercial Grower Handbook and Diary, 2321
Commonwealth Phytopathological News, a new periodical, 1282
Compost(s)—*see also* Soil, potting—
cellophane flakes used in, 2960
inoculation with bacteria, 3702
John Innes and other standard mixtures, 1969, 2031, 2053r, 2988, 3164
machines for mixing, 4276
mica used in, 1969
from spent opium poppy heads, 1916
Compost(s) (*continued*)—
from town wastes, 2959
Coniella diplodiella—*see* Vine diseases, fungus, white rot
Conifers—*see also* Trees and shrubs *and separate species*—
pests, 879, 950
propagation by cuttings, 3950, 3951
weed control, 3639-3643
for windbreaks, 2416f
Conopharyngia holstii, 851
Conotrachelus nenuphar—*see* Apple, Peach *and* Plum *under* pests, curculio
Containers for packing fruit and vegetables—*see* Packing, containers
Containers for raising plants—*see under* Nursery stock *and* Pot
Contour—*see* Planting
Convolvulus cneorum, 873
Convolvulus spp., weed—*see* Bindweed
Copernicia cerifera, 2203
Copper—
accumulation in soils, 2083
interrelationships with other elements, 1182, 3138, 4054
latex production in hevea affected by—*see under* Hevea latex stimulation
nutrition of—
citrus—*see* Citrus nutrition
fruit and nut trees, deciduous, 1256, 3465
tobacco, 758, 1261, 3867
tropical crops, 1182, 1203, 3136, 4254b
vegetables, 586, 690, 2746, 3781
sources, chelates, 3136
toxicity, 1347, 2745
Copra—*see* Coconut products
Corchorus olitorius, 3939b
Cordia macrostachya, 3682
Cordia spp., ornamental, 974v
Coreopsis flower buds, sap in, 4031o
Coriander—
enzymes, 3939w
leaf composition, 29
oil, 1920
Cork oak (*Quercus suber*), 3938
Cornus florida, 2347
Cornus spp., uses, 3041z
Corsica, horticulture, 1374t
Corticium—
invisum, 1235n
solani, 731, 926, 1758, 1760, 2201, 2783, 2852, 2865f, 2900, 3973
theae, 1235n
Cortisone, plant sources of, 1912, 2948u
Corylus (hazel, cob nut and filbert)—
growing in various countries, 320, 326i, 2558m, 3456d
kernel composition, 1506
marketing, 3456r
mycorrhiza, 319
pollination, 320
propagation, 319
variety, small leaved, 321
Corynebacterium fascians, 445q

Corynebacterium michiganense, 3897
Coryneum beijerinckii, 2657
Cosmopolites sordidus—*see* Banana pests, borer
Cosmos—
diseases, 3947
flower buds, sap in, 4031o
growth, 42
seed treatment, 3947
Costs—*see under* Economics
Cotinus nitida, 1899, 2908b
Cotoneaster—
diseases, 948
as a rootstock for pome fruits, 162, 260a
rootstocks, 4018
Cotyledons, variation in number, 1903d
Couch grass—*see Agropyron, Cynodon and Panicum* spp.
Cover crops—
for deciduous fruit trees—*see also* Apple, soil management—217, 218, 1446, 2451-2453, 2455, 3381, 3388
for green manuring, 758, 1852, 1862, 2306k, 2908j, 3192h, 3474, 4255c
machines for mowing, 2454
and nematode control, 4094
plants—
Calopogonium mucunoides, 1136, 3136
Calotropis procera, 3192h
clover, subterranean (*Trifolium subterraneum*), 311, 3388
cow pea (*Vigna sinensis*), 3136
Crotalaria spp., 4094
Eragrostis curvula, 1862
Glycine javanica, 2072
Glyricidia maculata, 4255c
grass and clover swards, 217, 2451-2453
Hydrocotyle (*Centella*) *asiatica*, 4238
Indigofera spp., 1146, 4094
Medicago spp., 3388
Mucuna enana, 2305b
Sesbania spp., 2306k
soya bean, 1852
Stylosanthes gracilis, 4239
vetches, 542
for small fruits, 1469
for tropical and sub-tropical crops—*see also* Citrus, Coconut, Coffee *and* Tea *under* soil management—2306w, 4197
for vines—*see* Vine, soil management
Crabgrass (*Digitaria* spp.) and its control, 450, 479, 484, 485, 523e, 832, 1217, 1644, 1658, 2678, 2700, 2733, 2737h, 3626-3631, 3649, 3676
Crambus caliginosellus, 802s
Cranberry—
composition fruit, 326h
diseases, 331
nutrition, 2513
pests, 331, 2513
products, 326h
research in Canada, 2320
varieties, 326d
weed control, 331, 2513, 2737a, 3620, 3621
Crataegus spp.—
diseases, 2043
as food plants, 260r
pests, 426, 2962
propagation by cuttings, 873
soil requirements, 4011
Crocidolomia binotalis, 567
Crocus, flower development, X-rays hasten, 1996
Crocus, tetraploidy, colchicine induces, 2053w
Cronartium ribicola, 267, 3523
Crotalaria spp., nematode resistance, 4094
Croton sparsiflorus, 469
Crown gall control, 445q, 1941
Crucifers—*see also* Brassicas *and individual crops*—
diseases and pests, 2864k
seed treatment, 1685
seedlings, raising of, 1837n
Cryptoblabes gnidella, 3562
Cryptocarya massoia, 1277
Cryptolaemus montrouzieri, 3217
Cryptomeria japonica, 4031b
Cryptostegia grandiflora, 4199
Cryptotaenia japonica, 537
Cuba, crops, 2908 l
Cucumber and gherkin—*see also* Cucurbits—
breeding, 531, 732a
climate—
frost resistance, 531
light responses, 574, 2780
temperature responses, 574, 3250
composition, 2744, 2866t
diseases—
bacterial, 581, 3711, 3739, 3856w
fungus, 582-584, 1698, 1732, 2781, 2783, 2865k, 3740-3745, 3856w
non-parasitic, 582
resistance to, 2777
virus, 579, 580, 733j, 1885, 3738
flowers, sex expression, 2778
growing under plastic lights, 2406
growing in various countries, 1837t, 2865x, 2866e
growth—
antibiotics affect, 68, 1942
growth substances affect, 54, 2384
herbicides affect, 2731
soil sterilization affects, 2350
harvesting, 1725
hybrid vigour, 533
nutrition—
bacterial fertilizer, 2779
foliar, 586, 3223, 3737
manuring and major elements, 576, 577, 1689, 1885, 2744, 3209, 3704, 3833
minor elements, 586, 2359, 2744, 3704
packing, grading, 2865t
pests—
insects, 585, 3122, 3747
mites, 2865r
nematodes, 550
physiology and metabolism—*see also above*, climate—582, 2359

Cucumber and gherkin (*continued*)—
planting, spacing, 576
planting, transplanting, 575
pollen germination, 1724
products, 586
propagation—*see also below*, seed—by grafting, 582
pruning and training, 1722, 1723
root system, 3223
as a rootstock for tomatoes, 2835
seed—
germination, 537
production, 534
storage, 1684
treatments, 2750, 2778
soil—
management, sterilization, 2350
management, weed control, 498, 3600, 3659
requirements and composts, 578, 3802
varieties, cucumber, 532, 574, 733k, 2777, 3735, 3856w
varieties, gherkin, 532, 1837m, 1837t, 2866e
Cucurbita—
ficifolia, 582
mixta, 3855j
pepo, ornamental forms, origin of, 1983
Cucurbits—*see also Cucurbita and individual crops*—
composition, 2864r
growing in various countries, 2864w
herbicide injury, 2738
parthenocarpy induced, 592
pests, 2784, 3746
seed treatment, 1685
weed control, 488, 494, 499
Cupressocyparis leylandii, 4031g
Cupressus spp., pests, 950
Curcuma longa, 3939o
Currant—*see* Black currant *and* Red currant
Curvularia lunata, 2999
Cuttings—
aerial root formation encouraged as prelude to taking, 808
auxin blockage in, 64
flower bud formation induced on, 3938
fumigation, 4204
fungicide treatment—*see also* Sugar-cane setts, treatments—2173, 3176
growth—
shoot, growth substances affect, 1114, 1198
substances—
natural in rooting media, 1964
for rooting, 65, 317, 905, 962, 966, 967, 985, 1050, 1098, 1409, 1964, 2171, 2172, 2505, 3026, 3035, 3049, 3180, 3339, 3340, 3938, 4024, 4027
transfer between, 4020
insecticide treatment, 3176
leaf-blade, 2985, 3005
leaf-bud, 154, 2433
leaves, composition, mist sprays affect, 2434
light, artificial, for, 1962
light responses, 73, 4028
Cuttings (*continued*)—
mist humidification for, 73-75, 153, 154, 871, 1408, 1981, 2434, 2954, 3307, 3340, 3341, 3950, 4027
nutrient mist for, 871
nutrient solution treatment for, 1050, 1965
planting angle, rooting affected by, 1051
plants propagated from—*for separate plants see each under* propagation—
conifers, 3950, 3951, 4027, 4028
ornamentals—
herbaceous—*see also* Carnation *and* Chrysanthemum—974g, 4030v
various, 905, 2985, 3005
woody—*see also* Azalea, Camellia, Holly, Magnolia, Rhododendron *and* Rose—872, 873, 953, 962, 1964, 2949, 3035, 3341, 3950, 3951
Prunus spp.—*see also* Cherry *and* Plum—4008
small fruits—*see also* Blueberry *and* Vine—266, 270, 1475, 2389, 2505, 2508, 2514, 3424
temperate fruit and nut trees—*see also* Apple, Cherry *and* Plum—151, 317, 2433, 3340, 3341, 3469
tropical and subtropical crops, tree and bush—*see also* Cacao, Citrus, Coffee, Olive *and* Tea—1176, 2232, 3190, 3341
tropical and subtropical crops, various—*see also* Pineapple and Sugar-cane setts—808, 809, 845, 864, 2910, 2915
vegetables, 556, 3717, 3794
plastic covers to protect, 959, 2046, 2954, 4234
plastic sheet laid directly on, 2172
potassium permanganate treatment of, 2389
propagating frame for, 872, 2171
reviews on, 69-71, 76, 151, 153, 2415q, 2915, 3315s
root, plants propagated from, 72, 76, 270, 873, 4030v
rooted, storage, 3951
rooting media, 1409, 1410, 1964, 1965, 3949, 4027
source—
forced plants, 953
plants of different ages, 1220, 2508
shoots of different ages, 2232, 3965
storage and stratification—*see also above*, rooted—1221, 2952, 2973, 3794, 4008
temperature responses, 73, 1964
tip, for virus elimination, 877
vitamin treatment of, 1493
Cutworm control, 2153, 3557, 4229
Cyanide, physiological action of, 1746
Cycads, growing in Algeria, 2040
Cyclamen—
breeding, 975f, 975g, 975n
climate, natural and glasshouse compared, 1960
diseases, 2986, 3978, 4030n
flower colours and pigments, 975f, 975g, 1999, 4031t

Cyclamen (*continued*)—
flower yields for cutting, 908, 3977
nutrition, 906, 907, 2986, 3281, 4031c
pests, 2963, 2986
seed germination, 2987, 2988
soil composts, 2986
soil pH, 907
species and varieties, 975i, 3977
Cycloconium oleaginum, 3113
Cydia—
leucostoma, 2295, 4246
molesta—*see* Fruit moth, oriental
pomonella—*see* Codling moth
Cylindrocarpon radicicola, 2986, 3978, 4030n
Cylindrosporium padi, 381, 1559
Cymbopogon spp., yielding citronella and other aromatic oils, 825, 1257
Cynodon spp., as lawn grasses, 2700, 2701
Cynodon spp., as weeds, 1773, 2723
Cyperus—
esculentus, temperature responses, 671
rotundus as a medicinal plant, 3894
spp., as ornamentals, 3955
spp., as weeds (nutgrass), 476, 523d, 1272, 1662-1664, 2682, 2683, 2725, 2900
Cyprus, crops, 1068o, 1388, 1468k, 1476, 2148m, 2148p, 2156, 3856y
Cyprus Dep. Agric., A.R., 1259
Cyrtanthus spp., hybrids, 974r
Cytisus spp., propagation by cuttings, 873
Cytospora spp., unspecified, 1564
Czechoslovakia, crops, tobacco, 734

Dacrydium biforme, 1954e
Dactylium dendroides, 2811
Dactylopius opuntiae, 1648
Dacus—
bivittatus cucumarius, 2784
ciliatus, 2784
cucurbitae, 591, 1076, 3593
dorsalis, 827, 1075, 1076, 3587, 3593
oleae—*see* Olive pests, fly
spp., various, 3122
tryoni, 1607
Daffodil—*see* Narcissus *and under* Bulbs
Dahlia—
diseases, 877, 2989
flower pigments, 2053b, 3042g
growing in various countries, 975k, 3042e
nutrition, 4031c
pests, 2000
physiology, photoperiodic responses, 874, 909, 2950
stocks, maintenance of virus-free, 877, 3944
varieties, 2950, 3041s, 3209
Dalcera abrasa, 1150
Damping-off—*see also Corticium*, *Pythium and other relevant genera*—
control by burning material on seed beds, 792
control with chemicals, 731, 792, 1758-1760, 1826, 1981, 2753, 2900, 3884, 3947
soil organic matter affects, 1759
varietal resistance, 2865f
Damson pests, 409, 419, 2639
Danish—*see under* Denmark
Dasyneura affinis, 1992
Dasyneura brassicae, 3731
Date—*see also Phoenix*—
climate, drought responses, 1005
climate, heat tolerance, 1068s
composition, fruit, 3103
composition, leaf and root, 4112
diseases, fungus, 1043
diseases, non-parasitic, 1041
fruit—
bunch covers, 1042, 1043
quality, factors affecting, 1041, 1068s
thinning, 1041, 3101
growing in French West and Equatorial Africa, 1039, 4111
growing in North Africa, 1068h
history, 4127j
nutrition, 4112
palm removal, 1045
pests, 1044, 3102, 4128k
pollination and pollen, 1041, 3101
propagation by suckers, 3101
research in North Africa, 3208
soil management, irrigation, 1005, 1040
varieties, 3103
Datura—
spp., destruction of undesirable, 3607, 3688
spp., intergeneric grafts, 773
stramonium, varieties, 818
Deer control and repellents, 2653
Deficiencies, mineral—*see also* Minor elements, Nutrition *and individual elements*—
in Australia, 1695
diagnosis of, 88, 562
in various plants, 876, 2358, 3598b
Defoliation with chemicals, 48, 50, 197, 634, 635, 2690, 2808, 2934, 3856 l, 4012
Defoliation, flowering responses to, 4012, 4056
Dehydration—*see* Drying
Delia—
antiqua—*see* Onion pests, flies
cilicrura, 2797, 2807
spp., unspecified, 631, 632
Delphinium—
air pollution, 2961
flower abnormalities, 2053c
flower pigments, 4276
plants, packing, 880
seed oil, 3041n
Dematophora necatrix—*see Rosellinia*
Demostachya bipinnata, 3906
Dendromyza cerasiferae, 2671j
Denmark—
crops, fruit, 2504j, 2523
crops, vegetables, 1680, 2865j, 3209
Horticultural Yearbook, 3209
horticulture and horticultural research, 1288, 1301
Seed Path. Serv., A.R., 3234a
Seed Testing Stat., A.R., 3234s
Derris—
breeding, 1272
defoliation, chemical, 2934

Derris (*continued*)—
nutrition, 865r
physiology, 1272
propagation by cuttings, 845
Desert, ornamental plants for, 1959
Desert plants, associations of, 3274
Deuterophoma tracheiphila, 2099, 4083
Deutzia spp., fluorine accumulation, 2347
Deutzia spp., forcing, 2032
Dew—*see under* Climate
Dextrose, foliar application to plants, 2845
Diabrotica spp., unspecified, 1735
Diabrotica undecimpunctata, 3747
Diadoxus spp., pests of conifers, 950
Dianthus spp.—
air pollution, 2961
diseases and pests, 1697, 3963
varieties, 974a
Diaphorina citri, 3089, 4090, 4091
Diaporthe citri, 1034, 1035, 2100
Diarthrothrips coffeae, 4283
Diaspis bromeliae, 3156
Diaspis carueli, 2962
Diatraea spp., on sugar cane—*see* Sugar-cane, pests, borers
Dichapetalum cymosum, 2347
Dictionaries of—
diseases and pests, 2559
gardening, 3202, 4265
trees and shrubs, 3193
Dicytota dichotoma, 1954b
Didymella applanata, 386
Didymella lycopersici, 3744
Diervilla florida, 945
Diervilla spp., forcing, 2032
Digitalis spp., glycosides, 3939u
Digitaria—*see* Crabgrass
Dinoderus minutus, 3934
Dioscorea spp., alkaloids, 1272, 1911, 2916, 2948c
Dioscorea spp., as ornamentals, 2990
Diospyros—*see also* Persimmon—*virginiana*, 125
Diplocarpon rosae, 939, 940, 2027, 3021
Diplodia natalensis, 2125
Diplodia theobromae, 2173
Disease(s)—*see also* Bacterial *and* Virus *and separate pathogens and hosts*—
books on, 4263, 4294a
composition and metabolism of plants affected by—*see also* Toxins, pathogen-produced—213, 787-789
control—*see also* Antibiotics *and* Fungicides—
biological, 328
with chlorinated water, 1770
by flooding, 2158
by mulching, 1568
dictionary of, 2559
infections, accumulation of radioactive substances at, 2908p
investigations, statistical methods for, 3522
of ornamental plants—*see* Ornamental plants *and* Trees and shrubs
Disease(s) (*continued*)—
resistance—
breeding for, 15, 16
factors affecting, 1772, 2591, 2616, 2866k, 2931, 3159, 3264, 3728, 4243
host nutrition relationships, 1757, 3534
Distantiella theobroma, 2188
Ditylenchus dipsaci, 921, 2820, 3856a
Dock, root regeneration, 72
Dodder (*Cuscuta* spp.), control, 3623
Dodder (*Cuscuta* spp.), virus transmission by, 965, 3841
Dominica, Dep. Agric. For., A.R., 3234e
Dominica, fruit and plantation crops, 2148b
Dominican Republic, crops, 1235u
Dormancy—
breaking in bulbs and corms, 911, 2996
breaking in woody plants, 2391, 3338
in ericaceous plants, 2041
growth substances induce, 185, 4066
growth substances prolong—*see also* Onion bulb—in plants, 53, 3797
irradiations prolong, 1775
prolonged, in deciduous trees and shrubs, 129, 268, 352, 1507, 2570, 3488, 3598d
related to protoplasm contraction, 3442
reviews on, 3252
seed—*see* Seed
in vine, 2558q, 3442
Dothidella ulei, 2305e
Dothiorella gregaria—*see Botryosphaeria ribis*
Drainage—*see* Soil drainage
Dried Fruits Control Bd, Australia, A.R., 1468c
Driers—*see* Drying kilns
Drosophila melanogaster, 3458
Drosophila spp., unspecified, 1608, 1625, 3553
Drought—
resistance—
moisture retention of leaf affects, 2572
of tropical plants, 83
in woody plants, 3316a
responses of—
deciduous fruit trees, 351, 1531, 1532, 3489
evergreen fruit trees, 1005
small fruits, 2521
vegetables, 703, 704
Drug plants—*see* Medicinal plants
Drying—
electricity for, 1954h
hops, 1954h
kilns and machines for—
copra—*see under* Coconut products
tea, 2297, 2298
tobacco—*see under* Tobacco curing
oil-palm kernels, 1161
persimmons, 1068n
seeds, 1954h, 2394, 4164
Dryocosmus kuriphilus, 424, 1015
Dulichium arundinaceum, 3621
Duranta spp., in Argentina, 4030f
Durian (*Durio zibethinus*), 1271
Dust application from aircraft—*see* Aircraft
Dust application by drift methods, 2932

Dusters, hand-operated, 2772, 2965
Dusters, power-operated, 2932, 4255m
Dutch lights—*see* Frames
Dwarfing trees, methods of, 2340k, 3207
Dyera costulata, 851
Dyes, fungicidal action, 4107
Dyes, plant sources, 1917, 3933
Dysmicoccus brevipes, 4130

Earthworm control, 3998
East African Agric. For. Res. Organ., A.R., 3213
East African Sisal Ind., A.R., 832
East Malling Research Station, A.R., 3214
Echinocacteae, taxonomy, 974k
Economics—*see also* Labour *and* Trade—
  agricultural, general aspects, 2415e
  of cold storage, 2493
  of crops—
    fruit harvesting, packing and marketing—*see* Harvesting, Packing *and* Marketing
    glasshouse, 100
    nursery, 1957
    ornamentals, 1957, 1958
    temperate fruit and nut trees, 260q, 1386, 1387, 3396, 3408i, 3408j
    tropical and subtropical fruit and plantation—*see also* Citrus, Coffee *and* Hevea—1069, 2198, 4150, 4254u, 4255f
    various—*see also* Tobacco—3940a
    vegetables—*see also* Tomato—1793
  graphic analysis, methods of, 1302
  of grubbing orchards and plantations, 1045
  horticultural, general aspects, 10, 1301, 3243
  of mechanization, 3408j, 4255f
  of plant protection, 327, 2102
  of weed control, 3599
Ecuador, coffee growing, 1262
Edinburgh and East of Scotland Coll. Agric., A.R., 2340d
Efford exp. Hort. Stat., guide to, 4294o
Eggplant—
  composition, 1836, 3852
  diseases, fungus, 4132
  diseases, virus, 1821, 3852
  growth substance responses, 727
  pests, 732s, 2864x, 3853
  pollen germination, 1724
  propagation by grafting, 3223
  seed germination, 537
Egypt—
  ancient, gardens in, 2957
  crops, vegetable, 1837a, 2866 l
  horticulture, 2415x
Eichhornia crassipes,—*see* Water-hyacinth
Elaeagnus—
  macrophylla, 3437
  multiflora, 125
  spp., in France, 974e
Elaeis (mainly *E. guineensis*—oil palms)—
  breeding and selection, 1156, 3149, 3151
  climatic responses, 1157
  composition—
    fruit, 4184
Elaeis—composition (*continued*)—
    leaf, 1159, 3152, 4183
    plant, 4182
  diseases—
    fungus, *Fusarium oxysporum*, 2217
    fungus, leaf spot (*Cercospora elaeidis*), 3153
    non-parasitic, nutritional unbalance, 2217, 4183
  fruit—
    composition, 4184
    kernel development, fat metabolism during, 4184
    kernel drying and storage, 1161, 1162
    yield cycles, 4181
  growing in Central and South America, 2306h
  leaf composition—*see above*, composition
  nursery management, 3149
  nutrition—*see also above*, composition, leaf—1160, 2217, 3149, 4181-4183
  palm oil—
    content, determination, 2219
    extraction, 2218
    trade, 1069, 1263
  pests, monkeys, 2155
  planting—
    clearing land for, 3149
    methods, 1157
    spacing, 3149
  research—
    in the Belgian Congo, 1265
    in British West Africa, 3149
    in Malaya, 1271
  seed germination, 2216, 3191a
  seed moisture content, 1161
  soil management, intercropping, 1158
  spray injury, 3153
  varieties, 1156, 3150
Elder diseases, 2033
Elder propagation, 2514
Electric(al)—
  current, bird and mouse control by, 427, 2671i
  current, insect and nematode control by, 2856
  fences, 2154
  heating, horticultural uses of, 117n
  potential of plants, factors affecting, 3064
  vibrators for pollination, 2865g
Electricity—
  atmospheric, plant growth affected by, 24
  horticultural uses of, 1954h
Electronic waves, dormancy in onions prolonged by, 1775
Eleocharis dulcis, 3855k
Elettaria cardamom, 803
Eleusine indica, 486
Elm—
  pests, 1277, 2962
  photoperiodic responses, 945
  propagation, vegetative, 4009
Elsinoë ampelina, 1569
Elsinoë veneta, 386
Embryo culture, 145-147, 602, 2432, 3019, 3816

Embryo development in plants, 2504p, 2911, 3145, 4158
Emmalocera depressella, 4228
Empoasca—
abrupta, 1735
decedens, 2106
fabae, 3770
Empusa aphidis, 4131
Enarmonia spp., unspecified, 3039
Endive—*see also* Chicory—
air pollution, 3248
diseases, fungus, 2829, 3855m
weed control, 2716
Endogone spp., unspecified, 2534
Endosperm—*see* Seed
Endothia parasitica, 1505, 2555
England—*see under* Great Britain
Enzyme(s)—
activity—
blackening and browning of tissues due to, 780
in bulbs, 3982
carbon dioxide concentration affects, 35
changes during plant growth, 34, 770, 771, 1865, 1867, 1870, 2881
of cytoplasmic particles, 37
disease resistance related to, 1772
in fruits and seeds, 1744, 2474, 2948b, 3819, 4099
in latex, 2306r
light affects, 35, 2370
in nectaries, 969, 973
photoperiodism affects, 2372
in plants—*see also* Tobacco *and* Tomato *under* physiology, 1315, 2375, 3939v
respiration affected by, 1903m
as a varietal characteristic, 34
amylase, 1869, 1870
carbohydrase, 1865, 2881
carbonic anhydrase, 34
catalase, 1867, 2370, 2881
decarboxylase, 2127
fructokinase, 1745
glutamine-synthesizing, 1318
hexokinase, 38
oxidase, 36, 61, 1331, 1865, 1867, 2372, 2881, 3939w
pectic, 1056, 1640c, 1772, 4128h
peroxidase, 1317, 1343, 2372
phosphatase, 2374
phospholipase, 2375
reductase, 1903m, 1314, 3721
ribonuclease, 1313, 2376
saccharase, 1868, 1869
transfructosidase, 865d
vegetable-oil extraction aided by, 1056
Eotetranychus—*see Tetranychus*
Epilachna varivestis, 546, 630
Epinotia spp., unspecified, 628
Epiphyllum spp., culture of, 927
Epithelantha micromeris, 2053e
Equisetum spp., control, 451
Eragrostis curvula, 1862
Eremophila mitchelli, 2927
Erianthus ravennae, 3906
Erica spp., diseases, 3042o, 4030s, 4276
Ericaceae, ornamental, pruning, 3041t
Ericaceae, winter resting stages, 2041
Erigeron bonariensis, 3841
Erioischia brassicae, 566, 1713, 1786, 2770, 3730, 3856x
Eriophyes—*see also Phytoptus*—
carinatus, 4233
menthae, 1924
thuje, 879
Erwinia—*see also Bacterium*—
amylovora, 361, 948, 1274, 1513, 1554, 1555, 2585, 3041b
aroideae, 1711, 2908d
chrysanthemi, 1980, 3967
spp., unspecified, 904, 1974
tracheiphila, 3739
Erysiphe cichoracearum, 785, 1732, 2660, 2782, 3744
Erysiphe polygoni, 627
Erythrina indica, 2948r
Erythrina lithosperma, 467
Erythronium spp., ornamental, 1956
Escallonia spp., cytology, 4031v
Essential oil(s)—*see also individual oil-bearing species*—
angelica (*Angelica archangelica*), 823
Aristolochia indica, 1918
balsam, Canada (*Abies balsamea*), 824
bay (*Pimenta racemosa*), 865h
black spruce (*Picea mariana*), 824
camphor, 826
cedar wood, 1277
citronella—*see Cymbopogon* spp.
citrus, 1919
content, determination, 1925
content, factors affecting, 1922-1924
coriander, 1920
Dacrydium biforme, 1954e
distillation, 1954n, 3905
geranium (*Pelargonium* spp.), 1921
massoi (*Cryptocarya massoia*), 1277
mokihana (*Pelea anisata*), 827
nutgrass (*Cyperus rotundus*), 3894
oleo pardo (*Myrocarpus frondosus*), 865s
peppermint—*see under* Mint
Phellodendron amurense, 2948f
plants—
enzymes in, 3939w
in Madagascar, 1954g
and production in the Western Hemisphere, 852
reviews on, 1954z
rose, 1925, 1954n
Salvia sclarea, 2925, 2926
santal camphor (*Eremophila mitchelli*), 2927
seaweed, 1954b, 1954p
Strobilanthopsis linifolia, 2928
Estonia, fruit varieties, 3205
Ethylene—
compounds as fumigants—*see under* Fumigation, soil
concentration in fruit stores, 235

Ethylene (*continued*)—
emission—
by fruits, 246, 3399
by higher plants, 3199
by vegetables, 570
injury to plants, 3245
stomata affected by, 2054f
tetrachloro-, brown rot controlled by, 1562
treatment to advance flowering, 4189
treatment for ripening fruits, nuts or vegetables, 245, 246, 1030, 1031, 2148w
Eucalyptus favieri, origin and description, 2042
Eucalyptus spp., pests, 1615
Eucommia spp., gutta-percha from, 3917
Eugenia—see also Clove—*jambolana*, 3191k
Eumyrmococcus spp., unspecified, 4173
Euonymus spp.—
herbicidal injury, 2696
pests, 2054d
as rubber plants, 2941
Euphorbia—
× *Doinetiana* hybrid, 4030q
fulgens, 3029
spp.—
propagation by cuttings, 872
wax from, 3936
as weeds and their control, 455, 3601
Euproctis chrysorrhoea, 3598p, 3598t
Eupterote canaraica, 804
European and Mediterranean Plant Prot. Organ. (E.P.P.O.), Rep., 4273
Evaporation in agriculture, a discussion, 2351
Evolution in plants, a book on, 4259
Exobasidium vexans—see Tea diseases, fungus, blister blight
Exostema sanctaeluciae, 815
Experimental design—*see* Statistical
Explosives for tree removal, 117k
Explosives, use in orchards and vineyards, 2503y, 3217
Exports—*see under* Trade

Fasciation, in various plants, 445y, 2305v
Fats—*see also under* Oils—metabolism in germinating seeds, 3736
Fats and Oils, FAO Commodity Rep., 1263
Feijoa pomology, 2148j
Feijoa propagation, 2434
Fern physiology, light responses, 4282
Ferrisia virgata, 3217, 4030t
Fertilizers—*see also* Nutrition *and separate crops under* nutrition—
application—*see also below*, placement—
by aircraft, 2306u, 4255z
in irrigation water—*see* Irrigation
machinery for, 1363, 1364, 3856k
bacterial, 2743, 2779, 3702
carriers, cellophane flakes as, 2960
liquid, crop responses, 1518
nutritional value of crops affected by, 544, 571, 1468i
placement for fruit crops, 3381
placement for vegetables, 2742, 2743, 3856k
starter solutions, 1374o
Festuca rubra, 2017
Fibre(s)—
determination in plant materials, 2415k
extraction, 1277, 1929
hard, a review on, 1927
plants—*see also species of Abutilon, Agave, Hibiscus, Ipomoea, Luffa, Phormium, Raphia and Sansevieria, and* Bamboo, Banana, Hemp, Kapok, Manila hemp, Ramie *and* Sisal—a world list of, 1926
production and trade, 828, 1069
Ficus spp.—
elastica, 3191g
nekbudu, 4199
religiosa, 2053p
spp., nutrition, 2959
spp., propagation by cuttings, 872
tinctoria, 1917
Fig—
caprification, 3458
diseases, fungus, 1565, 1566, 1625, 3458, 3533, 3534
diseases, non-parasitic, 351
fruit—
composition, 326b
fumigation, 3588
parthenocarpy induced in, 1441
radioactive bodies in, 1915, 3408y
ripening, growth substances hasten, 1441
growing in various countries, 260i, 1392, 2419, 2503d
growth, growth substances affect, 3377
nutrition, 1443
pests, insect, 1608, 1616, 1625, 1699, 3458, 3548, 3567, 3588, 3597n
research in North Africa, 123
research in the U.S.A., 1384, 1385
soil waterlogging, 3490
soil management, irrigation, 1448
storage, 3533
varieties, 1406, 3208, 3332
Fiji, Dep. Agric., A.R., 3234f
Filbert—*see under Corylus*
Finland, crops, 3345, 3409
Fish poisons from plants, 865j
Flame gun for weed control, 2737b
Flavour—*see also* Taste—in fruits, 1468i
Flavour in vegetables, 1468i
Flood fallowing for disease and pest control, etc., 2158, 3000
Flooding, plant responses to, 1351, 1818, 2272, 3490
Flora of—
Indo-China, 2306f
Madagascar, 2306e
Yugoslavia, 867
Florida—*see also under* United States—agric. Exp. Stats, A.R., 2325
Flower(s)—*see also individual flower crops, and other crops under* flower—
annual, for Canadian gardens, 3042h
arrangement and display, 882
colour—*see also below*, pigments—descriptions, 9

Flower(s) (*continued*)—
colour development, a review, 1967
cut—
marketing, 975 l
prolonging life of, 1977, 2952, 2966, 3960, 3985
quality, factors affecting, 883
storage and transport, 2014, 3960, 3989
development, factors affecting, 4056, 4059
diseases, 975e, 3946, 3947
drop, growth substances affect, 3758
drop, physiology of abscission, 4030z, 4031s
emasculation, instruments for, 260 l
formation, growth substances affect, 559, 2415f, 3105
formation, a review of processes leading to, 2416c
growing—
books on, 2340e
economics, 1958
in European countries, 2415a
under glass, 974f
in North America, 1958, 3042h
mounting for anatomical study, 12
pests, 974x
pigments, 2053b, 2054e
research in—
Great Britain, 3944
North Africa, 3208
the U.S.A., 1267
seed production in various countries, 1259
seed treatment, 3947
senescence, chemical changes associated with, 4007
sex, temperature affects, 4116
soil management, weed control, 474, 2737a
Flowering—
date, pest attacks alter, 1073
factors affecting, 968, 1341
gamma irradiation induces, 3868
physiology of, 1327
Fluorescent substances in plants, 117r, 3316g
Fluorine—
content of plants, 1007, 2347, 3078
injury—
to plants, 1534, 3078, 3245, 3246, 4128o
indicator plants for, 2348
to silk worms, 1640r
Foliar diagnosis—*see* Leaf analysis *and also individual plants under* composition *and* nutrition
Foliar nutrition—*see* Nutrition, foliar
Foliation, delayed—*see* Dormancy, prolonged
Fomes—
lignosus, 4264
noxius, 4264
spp., unspecified, 1149
Food and Agriculture Organization—
Commodity Rep., Fats and Oils, 1263
Dir.-Gen., A.R., 1285d
expanded tech. Assist. Progr., A.R., 1262
Food agric. Statist., Yearbook, 1285e
Forcing—*see also* Light *and* Photoperiodism—
fruit plants, 279, 280, 3064, 3223
ornamentals—
annual and herbaceous plants, 893, 895, 1991, 3042r
bulbs and tubers, 870, 915, 919, 1991, 2001, 2011, 2949, 2992, 3009, 3981, 3986, 3987
succulents, 884
woody, 946, 974h, 2032, 2053d, 3033, 3036, 3039, 4012
vegetables, 686
Forecasting crop maturity, 1433
Forecasting crop yields, 13, 186, 294, 1143, 1491
Forget-me-not varieties, 3041u
Forsythia, defoliation chemical, 4012
Forsythia forcing, 974h, 2032, 2950, 4012
Fortunella spp., seed characters, 980
Fragaria spp., seed treatment, 3421
Fragaria virginiana, 1324
Frames—*see also* Glasshouses *and* Soil heating—
construction, 1359
lights, Dutch, cropping under, 1837d
lights, mechanical raising of, 113
watering, 3295
Frameworking, fruit and plantation trees, evergreen, 2063, 2148e
France—
agriculture, 1954r
crops—
fruit, deciduous tree, 117j, 1378, 1400, 2424, 2503g, 2504k, 2504q
various, 2415a, 2942, 3892f
vegetables, 117j, 2415a, 2504k
horticulture, 1374t
Office Rech. sci. tech. Outre-Mer, Rep., 4287
ornamental shrubs, 2029
Frankliniella tritici, 2652
Franseria spp., control, 453, 2679
Freesia—
corms, composition, 2996
corms, storage, 2992
flower bud differentiation, 2993
forcing, 2992
mulching, 2991
pollination, 2991
seed germination, 2991
Freezing of cells, stages in the, 1530
French West and Equatorial Africa, crops—
bananas, 3217
cacao, 1093, 2306x
coffee, 1234 l, 2306x
various, 1039, 3217, 4111
Friesdorf/Bad Godesberg gärtn. Versuchsanst., A.R., 870, 4275
Frit, glass, a source of iron and other elements, 2994, 3281, 3597m
Frost—
damage—*see also* Apple, Cherry, Citrus, Peach, Pear *and* Vine *under* climate—to—

Frost—damage to (*continued*)—
deciduous fruit, 343, 349, 3041m, 3476, 3479
nuts, 3476, 3481
ornamentals, 3025, 3041m, 3958, 4030i, 4030u
tropical and subtropical crops, 1234b, 3192f, 4117, 4127v, 4169
protection—
by earthing up trees, 1053
by fans, 342, 346, 2091, 3483
by fans and heaters combined, 3482
by heaters, 342, 346, 1528, 3483, 4068, 4069
of nursery stock during transport, 2956
of ornamentals, 974o
by smoke or fog, 3484, 4068, 4069
by sprinkler irrigation, 86, 342, 1640f, 2873, 3486
by tents and other plant covers, 347, 682, 4068
resistance—
cultural and nutritional factors affecting, 1066, 2137, 3316 l, 4068
genetical aspects, 4235
growth substance treatments increase, 4066
origin of clone affects, 957
physiology and biochemistry of, 2566, 3264, 3442, 3485
plant vigour affects, 3918
rootstocks affect, 3999
tests for, 2565, 2972, 3249, 3316 l, 3477
warnings, 22, 2342
Fructose—*see also under* Sugars—determination, 3119s
Fruit(s)—*see also individual fruits*—
Annual, The, 2333
bagging, 1025, 1042
breeding—*see also* Breeding—127, 2420, 2421, 4271, 4281
composition and food value, 4294c
composition, variations in, 3408x
development *in vitro*, 2381
drop—*see also* Apple, Cacao, Citrus, Pear *and* Vine *under* fruit—
in black currants, 3412, 3414-3416
control by growth substances, 197, 200, 202, 203, 1024, 3075-3077, 3373, 3758, 4062
growth substances induce, 3112
in stone fruits, 2504s, 3373
in tea, 4240
in tropical fruits, 1138, 2060, 2182
in vegetables, 3758
fly(ies)—*see also separate species*—
control—
biological, 3597h
by fumigation, 1604, 1606, 1607, 3587
insecticides and baits for, 1075, 1076, 2140, 2641-2643, 3458, 3554
by low temperature, 1607
in India, 3122
growing, books on—*see* Manuals
growing in a dry climate, 351
Fruit(s) (*continued*)—
growth phases, 3145
lenticels, location of, 196
moth, oriental (*Cydia molesta*), 407, 410, 1015, 1609, 1610, 2670c
pests—*see also* Pests—birds, 1617
quality, estimation of, 3318
research in—
Belgium, 1382
France, 1378
Holland, 1379
Italy, 2420
tropical America, 1071
ripening, reviews on, 2503a
tissue culture, 977
tree(s)—*see also* Orchard—
flower bud formation, 183
growth, phenological records, 1430
root growth, 3408r
spacing, 3324
vapour-heat treatment, 2222
variety collections in the U.S.A., 3235
Yearbook, 1377
Fuchsia, flower forms, 956
Fuchsia, propagation by cuttings, 873
Fumigation—
of budwood, 1255
of bulbs, corms, etc., 913, 2009
chambers, mobile, 1638
of cuttings, suckers, etc., 4130, 4204
equipment for vaporization, 445 l
of fruits, 387, 1604, 1606, 1607, 2068, 2069, 2222, 3086, 3087, 3587, 3588
of glasshouses and glasshouse crops, 2965
plastic covers for, 2667
of seeds, 2815, 3768
soil—*see also* Soil sterilization—
with allyl alcohol, 1851
bromide toxicity, 4095
with carbon disulphide, 411, 1521
with chlorobromopropene, 1851
with chloropicrin, 516, 550, 726, 747, 2900, 3532
with D-D (dichloropropene-dichloropropane), 549, 590, 726, 782, 798, 988, 2330, 2751, 2828
with ethylene compounds, 411, 412, 414, 726, 782, 1164, 1857, 2751, 4095
with formaldehyde (formalin), 2828, 3791
under growing crops, 1164
methods and equipment for, 590, 1357, 2901
with methyl bromide, 731, 1981, 2900, 2997, 3791
for *Phylloxera* control, 411, 412, 414
plant responses to, 2751, 2997
for weed control, 515, 516, 1654, 1697, 2723, 2974
of stores or stored products, 1902, 2193, 2905
of trees and plants—
apparatus for, 1640j, 2667
with HCN, 1004, 1099
with methyl bromide, 1099, 1589

Fungi—*see also individual species, and plants under* diseases—
infection of plants by, 363
nematode control by, 395
pest control by, 4131
root infection, 2313
for weed control, 1645
Fungicide(s)—*see also* Antibiotics, Sprays, *and individual diseases and hosts*—
additives, 1556, 2599, 2671u, 3582, 3741
aerosols, 442, 2026
allyl alcohol, 2753
arsenic carbamate (Urbacide), 2658
aryloxyalkanecarboxylic acids, 1633
bees' response to, 1626
biological control upset by, 1586
bordeaux mixture, 394, 445c, 2866j, 3113, 3579
calcium sulphamate, 4170
captan, 364, 375, 434, 3027, 3500, 3506, 3597g, 3597y, 4244
chinonoximbenzoylhydrazon (Voronit), 2658
chloro-dimethylphenoxyethanol, 812
cinnamic acid, 3501
coal tar distillates, 1189
copper—*see also above*, bordeaux—
injury to plants, 353, 432, 586, 2670n, 3083, 3153, 3579
-oil mixtures, 4134
residues, 435, 3582, 3597y
synergistic action, 729, 2140
creosan, 3507
cyanuric chloride derivatives, 429
cycloheximide, 1734, 2028, 2614, 3521
dichloronaphthoquinone (Phygon) and related compounds, 4244
dimethyl tetrahydrothiadiazine thione, 3001
4: 6-dinitro-2-sec-octylphenyl crotonate, 3745
dinitrorodanbenzol, 2611, 2612
dinosam and dinoseb, 2657
dyes, 4107
ferbam, 1892, 3027, 3883, 4244
flavour effects on crops, 390, 1230, 1635, 4244
growth substances acting as, 722
-insecticide mixtures, 442, 940, 1013, 2026, 2140, 3113, 3576
karathane, 1698, 1732, 2660, 2782, 3515, 3516, 3743, 3744
lime-sulphur, 3580
limonene, irradiated, 4105
maneb, 1720, 1892, 3883
mercurial, 376, 1634
mixtures, 2658
-nematocide combinations, 1581
nitro phenols, 3581
nitrogen trichloride, 4102
2-norcamphane methanol, 812
for nursery stock in store, 881
oils, 4134
oxyquinoline sulphate, 3973
in paints for fruit stores, 249
pentachloronitrobenzene, 3001
pentachlorophenol derivatives, 2656
Fungicide(s) (*continued*)—
N-phenylmercuriethylenediamine (PMED), 2657
plant growth and metabolism affected by, 1892
pollen germination affected by, 2664
pyrites cinders as, 3711
quaternary ammonium compounds, 1574
quinoxaline derivatives, 3745
radioactive, 433
residues, 434, 3597g
reviews on, 445b, 1624, 3597x, 3598w
sodium methyldithiocarbamate, 3001
systemic, 1633, 2781
testing, 1636, 3597f
thiram, 377, 3523
training course in the use of, 1623
zineb, 364, 431, 784, 1571, 1892, 2610, 2660-2662, 2851, 3153, 3500, 3536, 3578, 3783, 3883, 3884
ziram, 377, 4244
Funtumia elastica, 851
Furcraea spp., as fibre plants, 4284
Fusarium—see also Damping-off—
culmorum, 1975, 3745
dianthi, 3962
lateritium, 330
moniliforme, 3126
oxysporum—
f. *conglutinans*, 2827
f. *dianthi*, 889, 2971
f. *gladioli*, 2005, 2998-3000
f. *nicotianae*, 743, 775, 2898
f. *perniciosum*, 2034
f. *pisi*, 1837g
f. *redolens*, 1706
form unspecified, 1707, 1733, 2217, 2969
sambucinum, 1954d
solani, 1837g, 3029, 3191j
spp., unspecified, 582, 1034, 1259, 1274, 2002, 2004, 2173, 2753, 2865k, 3843
Fusicladium—see also Apple *and* Pear *under* diseases, fungus, scab—*carpophilum*, 2657, 2670m

Gall midges of cereal crops, 2340b
Gallic acid in plants, 4243
Gamma irradiation of plants, 768, 1775, 2889, 3276, 3868
Ganoderma pseudoferreum, 4264
Garden(s)—*see also* Botanic—
of ancient Egypt, 2957
bog, 975b
design, 942, 2053x, 3041v, 3042q
public, plants for, 868
soils, management, a booklet on, 3942
Gardenia, nutrition, iron, 2952, 4003
Gardenia, propagation by cuttings, 872
Gardening—
Annual, Amateur, 3216
books on, 1246
Diary, Amateur, 4277
dictionary and encyclopaedia, 3202, 4265

Garlic—
bulbs, composition, 648, 732q
bulbs, medicinal principle in, 3940d
growing in various countries, 642, 1704, 2865n
pests, 1777, 2820
Geisenheim/Rheingau, work at, 4276, 4294c
Gentiana crinata, 894
Geococcus spp., unspecified, 4173
Geranium (*Geranium* and *Pelargonium* spp.)—
antibiotics from, 850
leaf composition, 947
leaf stomata, ethylene affects, 2054f
macrorrhizum, 1921
nutrition, 2959, 2976
oil, 1921
stem anatomy, 2053q
variegation in, 947
Gerbera, diseases, 2950
Gerbera, research in Great Britain, 3944
Germany—
agricultural statistics, 1294
crops, fruits, 3323, 3408i, 3408j
crops, vegetables, 2809
horticultural economics, 1301
nurseries, 2053k
plant protection and quarantine, 445u, 1512
Gesneria, photoperiodic response, 2950
Gherkin—*see under* Cucumber
Gibberella xylarioides, 3139
Ginger (*Zingiber officinale*), planting, 1905
Ginkgo biloba, defoliation, chemical, 4012
Girdling—*see* Ringing
Gladiolus—
air pollution, 2348, 3246
a book on, 3206
corm(s)—
composition, 2996
curing, 911
disinfection—*see also below*, diseases—913, 2004, 2006, 3000, 3003, 3004, 3979
dormancy breaking, 911, 2996
hot-water treatment, 2998-3000
storage, 2001, 2995
X-ray treatment, 1996
cormels, 2003
diseases—
fungus—
blight, southern (*Sclerotium rolfsii*), 913, 1255
corm-borne, 2997, 3979
Curvularia lunata, 2999
dry rot (*Sclerotinia gladioli* or *Stromatinia gladioli*), 2999-3001
fusarium rots and yellows (*Fusarium* spp.), 910, 1274, 2002, 2004, 2005, 2998-3000
scab, 2006
Stemphylium bostryosum, 912
non-parasitic, 2002
virus, 4030y
flower anthesis, X-rays hasten, 1996
flower spikes, breakdown, 2002
flowering, treatments to delay, 3980
Gladiolus (*continued*)—
forcing, 870, 2001
growing in various countries, 974y, 975c, 2053s, 3041i
nutrition, manuring, 910, 2002
nutrition, minor element, 910, 2002, 2994, 3466
pests, nematodes, 3002-3004
physiology, photoperiodic responses, 3980
research in South Africa, 2739
soil management, fumigation, 2997
soil management, weed control, 3600, 3637
varieties, 3002
Glass—
frit—*see* Frit
substitutes, 2405, 2406
types, light penetration affected by, 106
Glasshouse(s)—*see also* Frames—
climate—
air conditioning, 3299
air pollution, 3248
crop responses to, 974t, 1960, 2404
frost protection, 3198
temperature studies, 2415g, 3300
cold, 3198
construction, 103-105, 107
crops—
nutrition, 3302
ring culture method, 1808
vegetables, 1787
duster, small compressed air, 2965
experiments, design of, 11, 13
fumigation, 445 l, 2965
heating, 110, 732d, 1355, 2403, 2415o, 3315u
illumination, 99-102
insulation, 108, 2405, 3301
mobile, 974f, 1374u
paints and wood preservatives, toxic vapours from, 1639, 3020
plastic, 109, 2953, 2954, 3953
soil management, irrigation—*see* Irrigation
soil sterilization—*see* Soil
ventilation, 1355, 2404
Glenea aluensis, 2153
Gliricidia maculata, 4255c
Gloeosporium—
album, 365
kaki, 1061
perennans, 365, 2592
spp., unspecified, 232, 2591, 2593, 3398, 3598 l
theae-sinensis, 4243
Glomerella cingulata, 3028
Glossyparia spuria, 2962
Gloxinia—
forcing, 895
growing in various countries, 3041e
light and temperature responses, 1970
nutrition, 2959
pests, 2963
varieties, 870
Glucose—*see also* Sugars—dissimilation in plants, 1374j

Glutamic acid decarboxylase extraction from citrus fruits, 2127
Glyceria canadensis, 3621
Glyceric acid in plants, 2883
Glycerol, uptake of antibiotics increased by, 2755
Glycine javanica, 2072
Gnorimoschema operculella, 1827
Gold Coast, Dep. Agric., A.R., 3215
Gold Coast, Nungua agric. Res. Stat., Guide to, 1072
Goldenrod, air pollution, 2961
Gooseberry—
  breeding, 267, 2515, 2516
  composition, fruit, 3392
  diseases, fungus, 267, 3516, 3581
  growing in various countries, 1473, 2558n, 2558t
  pests, mite (*Bryobia praetiosa*), 1587, 2671d
  propagation, 266, 3424
  pruning, 2503p
  varieties—
    disease resistance, 2515
    general, 2503r, 2558y
    spineless, 2516
Gophers—*see under* Rodents
Gorse control, 3610
Gourd—
  bicoloured, origin of, 1983
  diseases, 4132
  pests, 732s, 3122
  seed germination, 536, 537
  Siam—*see Cucurbita ficifolia*
Grading—*see also* Packing—
  fruit in various countries, 117j, 1068f
  tobacco, 802b
  vegetables, 117j, 568, 2865t
Graft(ing)—*see also* Budding *and* Frame-working *and individual plants under* propagation—
  fungicide treatment for, 3027
  hybrids, 982
  inter-family, 2835
  monocotyledonous plants, 1272
  plastic materials for, 3142
  reciprocal, of early and late varieties, 607
  solanaceous plants, 601, 773
  tip, 2051
  union anatomy, 4115
Grape—*see* Vine
Graphognathus spp., unspecified, 3598v
Grapholitha molesta—*see* Fruit moth
Grapholitha packardi, 3563
Grass(es)—*see also individual species*—
  for lawns—*see* Lawn
  swards in orchards—*see* Cover crop plants
  as weeds—*see under* Weeds, control
Gravity, specific, branching of plants affected by, 42
Great Britain—*see also* Scotland *for departmental reports*—
  agricultural economics, 2415e
  agricultural statistics, 3234d, 3234 l-3234o
Great Britain (*continued*)—
  crops—
    flowers, 3042e, 4265
    fruits, small 262, 1280, 2558t
    fruits, tree and general, 1280, 1377, 3320, 3408o, 4265
    vegetables, 526, 1280, 1837z, 3694, 3695, 3700, 3856c, 4265
  horticulture, general, 1243, 4277
  horticulture stations, experimental, 1, 1287, 3234k, 3700, 4294m-4294p
  national agricultural advisory services, 118a, 1273
  national fruit trials, 3320
Greece, crops, 802c, 1068 l, 1903a, 2148a, 3408m
Grevillea robusta, 467, 1217
Growth—
  analytical presentation of plant, 1374z
  conditions, natural and cultural compared, 974t, 1960
  rhythms or phases of plants, 2877
Growth-substance(s)—*see also* Colchicine *and* Herbicides *and under individual crops*—
  abscission and—*see also* Defoliation *and* Fruit drop—48-50, 1335, 1336, 2382, 2383
  action, mode of, 52, 1374p, 2388, 3268
  biosynthesis in flowers, 1903g
  blockage, tumours caused by, 64
  boron applied with, 2845
  callus growth affected by, 772
  cell size affected by, 2387
  chelating agents as, 3268
  cobalt enhances action of, 3285
  compounds—
    adenine, 772
    anti-auxin, 1339
    aryloxyalkanecarboxylic acids, 51
    auxin, 64, 65, 69, 193, 559, 1341, 1709, 2382, 2484, 3265, 3316h, 3415
    benzimidazole derivatives, 1338
    chlorophenoxyacetic acid (PCA, POA, etc.), 2384, 4138
    chlorophenoxypropionic acid (CPP, etc.), 560, 1198
    4-chloro-3-nitrobenzoic acid (CNB), 1339
    3 - *p* - chlorophenyl - 1 : 1 - dimethyl urea (monuron), 2270
    p-chlorophenoxy-*iso*-butyric acid (PCIB), 1339
    cyanocinnamic acids, 1807
    cyano-dichlorophenylacrylic acid, 53
    2,4-D, 56, 57, 117z, 727, 1006, 1024, 1166, 1206, 1234f, 2093, 2094, 3075-3077, 4033, 4062, 4101, 4138
    2,4-dichlorophenoxyalkanenitriles, 1374h
    2,4-dichlorophenoxypropionic acid, 3267
    1,1-difluoroethylene, 3272
    2,4-dinitrophenol (DNP), 2908i
    dithiocarbamate derivatives, 52
    endothal, 197
    folic acid, 2386
    gibberellin and gibberellic acid, 609, 2387, 3269-3271, 3799

Growth-substance(s)—compounds (*continued*)—
hydroxyethylhydrazine, 2226, 4189
indoleacetic acid (heteroauxin)—*see also above*, auxin—58-63, 117w, 555, 772, 1198, 1339, 1374a, 4057, 4189
indoleacetonitrile (IAN), 58, 1374h
indolebutyric acid (IBA), 1198, 1343
indolepropionic acid, 1343
indolepyruvic acid, 59
kinetin (furfurylaminopurine), 772
maleic hydrazide, 205, 676, 750, 881, 1114, 1773, 1774, 1837q, 1857, 1979, 2270, 2388, 2533, 2758, 2888, 3112, 3273, 3377, 3797, 3985, 3993, 4190
methoxyphenylacetic acid (MOPA), 2866n
naphthaleneacetamide, 198, 3011
naphthaleneacetic acid (NAA), 198, 199, 202, 960, 967, 1166, 1167, 1169, 1198, 2227, 2383, 2415f, 3105, 4129, 4189
naphthylacetic acid, 197
naphthoxyphenylacetic acid, 836
naphthylmethylsulphide acetic acid (NMSA), 1339
naphthylmethylsulphide propionic acid (NMSP), 1339
phenoxyacetic acids, various, 2481
potassium permanganate, 2389
pyridinethione, 54
thiourea, 2390
tolylphthalamic acid, 3758
tomatine, 1939
2,4,5-trichloro phenoxyacetic acid (2,4,5-T), 200, 203, 2093, 3075, 3076, 4101, 4138
2,4,5-trichloro phenoxypropionic acid (2,4,5-TP), 201, 1264, 1440, 3375, 3376
triiodobenzoic acid (TIBA), 836
for cuttings—*see* Cuttings
as defoliants, 197, 2690
determination by chromatographic methods, 59, 3315g, 3315r
dormancy affected by—*see* Dormancy
enzyme activity in relation to, 61, 63, 1317, 1903g
flower bud induction affected by—*see also below*, photoperiodism—559, 1166, 1167, 1169, 1709, 2226, 2267, 2415f, 3105, 3256, 3370, 3938, 4189
flower thinning—*see below*, fruit
flowering—
advanced by, 1341, 3271, 4129
delayed or inhibited by, 560, 1341, 1979, 2270, 4190
stimulated by, 836
frost resistance affected by, 4066
fruit—
colouring enhanced by, 200, 2482, 3375
and flower thinning by, 197-199, 260e, 1006, 1261, 1439, 1507, 2417, 2474-2478, 3363-3368, 3370, 3371, 4285
ripening affected by—*see also* Citrus, storage life—200-204, 302, 303, 1441, 2417, 2482, 2678, 2846, 4138
set induced by—*see also below*, parthenocarpy—1499, 2093, 2845, 3374, 3450, 3827
Growth-substance(s)—fruit (*continued*)—
size affected by, 203, 204, 207, 301, 1006, 1439, 2093, 2482, 2483, 2506, 2845, 3076, 3372, 3416, 3450, 3830
storage life—*see also above*, ripening—affected by, 205, 4101
fungicidal action of, 2781
growth stimulated by, 4033
inhibiting—
cuttings and seedlings show different responses to, 1114
in plant extracts, 3601
in seeds—*see* Seed germination inhibitors
in tissue culture, 2415b
injury to plants—*see also* Herbicides—555, 2483
latex production in hevea affected by—*see* Hevea, latex stimulation
for marcotting—*see* Marcotting
oxidation in plant tissue, 1374h
parthenocarpy induced by—*see also above*, fruit set—592
permeability of protoplasm affected by, 117w
and photoperiodism—*see also above*, flower bud—1198, 2024, 3430
in plant organs—
buds, 185, 2049
flowers, 63, 4057
fruit, 802n, 2484, 3413, 3415
leaves, 1336, 2484, 2889, 3408p
pollen, 2484
roots, 3315g, 3316h, 4020
seeds and young seedlings—*see also* Seed germination inhibitors—55, 59, 1342, 2484, 3338
various, 3315b, 3315r, 3868
pollen responses to—*see* Pollen
protein metabolism affected by, 3855a
radioactive, 3834
rejuvenation induced by, 4020
respiration affected by, 3261
reviews on, 1374b
seed formation in plants enhanced by, 3011
soil moisture affects response to, 1006
storage life—
of cut holly prolonged by, 960
of fruit—*see above*, fruit
of vegetables prolonged by, 2758
and temperature, 1198
tests, 66, 67, 117q, 2382
tobacco axillary growth suppressed by—*see* Tobacco suckers
translocation, 56, 57, 117z, 193, 3265, 3266, 3273, 3834
transpiration affected by, 3369
tumours induced or inhibited by, 2385, 2386
for virus control, 3714, 3808
Guadeloupe, crops, sugar cane, 1234m
Guadua amplexifolia, 3935
Guadua angustifolia, 864, 3934
Guard cells—*see* Stomatal
Guava—
diseases, fungus, 3191j, 3191z, 4132

Guava (*continued*)—
fruit composition, 2306m, 3192d
packing, 3120
pests, fruit flies, 1075, 3122
pests, various insects, 3143
propagation, vegetative, 3142, 4032
Gumpenstein, Bundesversuchsanstalt alpenländ. Landwirtsch., A.R., 3696
Gutta-percha formation, factors affecting, 2941
Gutta-percha, plant sources and extraction, 3917
Guzmannia tricolor, 2022
Gymnosporangium juniperi-virginianae, 2028, 2043, 3521
Gypsophila diseases, 1984
Gypsy moth, 3598u

Hail damage to vegetables, 2738
Hail storms, prevention of, 1536
Haiti, agriculture, 1240
Halimodendron argenteum, 974e
Hamamelis virginiana, 1964
Hardiness—*see* Frost resistance
Hares—*see under* Rodents
Harrisina brillians, 445v
Harrow exp. Fm, Ont., Rep., 4285
Harvesting—*see also* Forecasting—
fruit—
bulk handling for, 1026, 1027
economics and time and motion studies, 1386
injuries received during, 4108
ladders for, 2487
machines for, 2141, 2488, 3455
methods, 1068r
various crops—*see also* Sugar-cane *and* Tobacco—847
vegetables, machines for, 1725, 3734
vegetables, methods, 3750, 3850
Hawaii(an)—
crops—
coffee, 3192m
fruits and nuts, 3192m, 4127o
general, 2150
vegetables, 3192m
Sugar Planters' Ass. and Exp. Stat. Cttee, A.R., 2246
Hawthorn—*see Crataegus*
Hazel—*see under Corylus*
Heat—*see also* Temperature—
ground cover to combat, 19
injury to fruit, 350
treatment—
of fruits, 2222, 3154
against fungi, 2222, 2998-3000, 3010, 3154
against nematodes—*see* Nematode control
against viruses—*see* Virus control
Heather competition with bracken, 1642
Heating—*see* Electrical, Glasshouse, Mushroom houses *and* Soil
Hecogenin—*see* Cortisone
Hedera—*see* Ivy

Hedge—*see also* Windbreaks—
plants—
bamboos as, 863
Cupressocyparis leylandii, 4031g
fruit trees as, 3359
for Great Britain, 4031a
trimming, machines for, 1365, 3313
Hedysarum coronarium, 2044, 2045, 4031h
Helianthus annuus—*see* Sunflower
Helianthus tuberosus—*see* Artichoke, Jerusalem
Heliopsis spp., varieties, ornamental, 974q
Heliothis armigera, 1827, 1829
Heliothis virescens, 1893
Helix aspersa, 3093
Helleborus spp., antibiotics from, 849
Helminthosporium cactivorum, 928
Helminthosporium incurvatum, 2194
Helopeltis spp., unspecified, 3185
Helopeltis theivora, 1234q
Hemerocallis varieties, 2054g
Hemiberlesia lataniae, 2066
Hemileia vastatrix, 2208, 3192a, 4291
Hemiptera, a book on, 3194
Hemitarsonemus latus, 3959
Hemlock (*Conium maculatum*) pests, 2962
Hemp (*Cannabis sativa*)—
diseases and disorders, 2948h
nutrition, 2929
production and trade, 828
Hemp, Manila—*see* Manila hemp
Henbane—*see Hyoscyamus*
Hendersonula toruloidea, 1576, 2616, 3534
Henequen (*Agave fourcroydes*), 828
Herbicide(s)—*see also* Defoliation, Trees and Shrubs destruction *and* Weed control, *and individual weeds*—
absorption and translocation, 446, 461, 495, 571, 1671, 2737n, 3686, 3688
application—
aerial, 3610
equipment for, decontamination, 1674
equipment for, types, 520, 522, 523h, 523n, 2735, 2737f, 3693 l
as granules or pellets, 1666, 3672, 3679
in irrigation water, 2711
low volume, 521
in mixtures with nutrients, 3687
for sugar cane roguing, 3169
compounds—*see also under* Growth-substance compounds—
allyl alcohol, 2720
3-amino-1,2,4-triazole (ATA), 464, 490, 2686, 2737 l
ammonium sulphamate, 467
arsenicals—*see also below*, sodium arsenite—1644, 1675b, 3614, 3631
borate-containing, 3645, 3693h
calcium cyanamide, 481, 3632
CDAA, 491
CDEA and CDEC, 3660
chlordane, 2737h
chlorobromopropene, 2737h

Herbicide(s)—compounds (*continued*)—
CIPC, 472, 504, 2713, 2716, 2730, 2731, 3637, 3668, 3672-3674
CMU—*see below*, monuron
2,4-D, 461, 468, 1534, 1674, 2675, 2678, 2711, 3601, 3602, 3624, 3649, 3662, 3686-3688
dalapon, 505, 517, 518, 2681, 2685, 2724, 2732, 3615, 3617, 3689
2,4-DES, 3617, 3637, 3641, 3643
dinitro compounds, 492, 3666
dinoseb (DNBP), 2710, 2737r, 3660, 3665
diuron, 519, 3637
ethyl xanthogen disulphide (EXD), 495
general, 523a, 523c, 523i, 1675c, 2675, 2676, 2737e, 3652, 3693e
hexachloroacetone, 2687
hexachlorocyclopentadiene, 2737h
IPC, 493, 3674
isopropyl xanthic acid (IPX), 3671, 3672
MCPA, 1675d, 2737d, 2737n, 3599
methyl bromide and related compounds—*see under* Fumigation, soil
MH, 1662, 1663, 2702, 3604, 3605 , 3617
monomethyl arsonic acid (MAA) or disodium salt, 2733, 3693f
monuron, 463, 473, 496, 519, 520, 1659, 1668, 1669, 1671, 2693, 2729, 3617, 3641, 3643, 3653
NPA, 499, 501, 2737 l
octachloro cyclohexenone (OCH), 2707, 2730
oils, 492, 523o, 3609, 3611, 3621, 3656-3658, 3693c, 3693g
PCP, 492, 523o, 2704, 3169, 3653, 3670
potassium chlorate, 3616
sodium—
arsenite, 461, 523g, 3608, 3644
chlorate, 3607, 3616, 3645, 3691, 3957
methyl dithiocarbamate, 3016, 3681, 3691
sulphuric acid, 492, 3670, 3671
2,4,5-T, 465, 467-470, 2737o, 3609
TCA, 458, 2703, 2938, 3169, 3689, 3693a
2,4,5-TES, 505, 513, 3678, 3680
2-(2,4,5-trichlorophenoxy)ethyl 2,2-dichloropropionate (erbon), 1673, 3690
cultivation *versus*, 448
decomposition, persistence and movement in soil, 518, 3649, 3684
effects—
crop injury, chemicals to prevent, 2734
crop injury, general, 463, 474, 479, 499, 504, 1534, 1652, 1658, 1669, 1671, 2678, 2694, 2696, 2703, 2710, 2711, 2718, 2734, 2737k, 2738, 2864k, 3245, 3601, 3602, 3624, 3649, 3662-3664, 3679, 3684, 3685, 3849, 3957
weeds' susceptibility to, 2675, 3649, 3688
toxicity to man, 1640o
radioactive, 3688
research, basic, 446
training course in the use of, 1623
volatility, 2730

Herbs, culinary—*see also individual plants*—4261
Herbs, medicinal—*see* Medicinal plants
Heterodera—
dubia, 2688
marioni, 3851
rostochiensis, 549
schachtii, 732s
Hevea—
bark, apiose in, 4255 l
a book on, 4269
breeding and selection, 1174, 3191i, 4193
clones—*see also below*, seedlings—1174, 1175, 2229, 2231, 2305e, 3191i, 4192, 4193, 4255v
composition—*see below*, latex, leaf *and* seed
diseases—
fungus—
black thread, stripe or leaf fall (*Phytophthora palmivora*), 1188, 2236, 4233
coloured canker (*Pythium complectens*), 1188
mildew (*Oidium heveae*), 2235, 3159, 4255m
mouldy rot (*Ceratostomella fimbriata*), 1189, 4255s
root rots (*Armillaria*, *Fomes* and *Ganoderma* spp.), 4264
South American leaf blight (*Dothidella ulei*), 2305e
various, in different countries, 4269
economics, 4255b
growing in Africa, 1234z, 4254r
growing in the Far East, 4255j
growth, juvenile forms, 1176, 2232, 4195
growth measurement, 1180
latex—*see also below*, rubber—
clarification, 1187
composition and properties, 1182, 1187, 1234n, 2234, 2240, 2241, 2243-2245, 3158, 4200, 4254g, 4254q
cups, 3191d
dry rubber content, determination, 1234i, 2242, 3191g
particle structure, 4199
physiology, 1235q, 2239
processing, 1234e, 4254v
skim serum as fertilizer, 4194
stimulation by growth substances, 1186, 1234f, 1235w, 2239
stimulation by minor elements, 1186, 1235w
stock-scion effects on, 1177
vessels, counts, 4196
yields, 2228, 2229, 4198
leaf composition, 1180, 1181, 1184, 2234, 3158
nutrition—
growth measurements as a guide to, 1180
latex analysis a guide to, 1182, 2234
leaf analysis as a guide to—*see above under* leaf
manuring and major elements, 1181-1183, 3191b, 3196, 4197, 4254 l

Insecticide(s)—BHC (*continued*)—
residues on crops and their analysis, 3592, 3597y
residues and persistence in soil, 548
biological balance affected by, 1586, 3119e
biological control to supplement, 3576
calcium cyanamide, 430, 2864x
capstick form, 1997
chlorbenside, 3597y
chlordane, 1899, 2276, 3594, 4030a, 4136
cyanuric chloride derivatives, 429
DDT—
analogues and isosteres of, 445x
mites encouraged by, 2619, 3576
plant growth and injury responses to, 3748
residues on crops and their analysis, 435, 3597y
residues in soil, 548
demeton, 917, 1628, 1630-1632, 1640a, 2664, 2902, 2933, 3577, 4090
diazinon, 445k
dieldrin, 782, 920, 1625, 2054k, 3458
0,0-dialkyl S-alkylthiomethyl phosphorodithioates, 445e
0,0-diethyldithiophosphophorylacetic acid derivatives, 3114
dilution tables, 3598g
dimefox, 1118, 2189, 2190, 3912
dimethyl carbomethoxy-propenyl phosphate, 2864 l
0,0-dimethyldithiophosphorylacetic acid derivatives, 3114
endrin, 2865h, 4231
flavour effects on crops—*see also above*, BHC, *and below*, lindane—1230, 2665, 4245
fluorine compounds, 1640m
-fungicides mixture—*see* Fungicides
heptachlor, 1625, 3594, 3886
lindane (gamma-BHC)—*see also above*, BHC—
application, 3123
flavour effects on crops, 1900
plant growth and injury responses, 1899, 3123, 3988
residues on crops and in soils, 640, 2864y
malathion, 970, 1701, 2857, 3222, 4092
methoxychlor, 436
oils, 1016
parathion—
absorption and translocation, 548
copper fungicides enhance action, 2140
for fruit tree pests, 1015
for mite control—*see* Acaricides
mixtures with other insecticides, 3091
ovicidal action, 2671r
residues on crops and their analysis, 1701, 2652, 2666, 2857, 3113, 3595
residues on crops, removal, 733g
toxicity to man and precautions in using, 1640n, 1640o
pentachloronitrobenzene, 1712
Insecticide(s) (*continued*)—
plant growth and injury responses—*see also above*, BHC, DDT *and* lindane—970, 3577
plant sources of—*see* Insecticidal
pollen germination affected by, 2664
pyrethrum, 2936, 2940
radioactive, 1631, 1632, 2902
residues, general aspects and reviews, 732v, 2665, 2857
reviews on, 445b, 1624, 3203, 3598f
ryania, 420, 2670b
schradan, 917, 1628, 2277, 2633
seed treatment with—*see* Seed
soap as, 3583
solvents, stickers and wetters—*see above under* additives
systemic—*see also* Acaricides *and* Nematode control *and individual insecticides*—430, 445d, 445e, 1997, 2190, 3885
for tobacco, 1901
toxaphene, 733g, 2670 l
toxicity to bees—*see* Bees
toxicity to man and precautions in using, 1640n, 1640o, 3598f
training course in the use of, 1623
for vegetables, 547
vinyl phosphates, isomeric substituted, 445d, 3593
Institut—*see also place names*—
Fruits Agrumes colon., Paris, A.R., 3234g
Fruits Agrumes colon., Stat. centr. Cult. fruit., Kindia, A.R., 3217
nat. Étude agron. Congo belge (I.N.E.A.C.), A.R., 1265
nat. Rech. agron., Paris, A.R., 1266, 3234h
Insurance, crop, 1234o
Inter-American Cacao Center, Turrialba, work at, 2165
Inter-American Inst. agric. Sci., A.R., 4279
Interstocks for pome fruits—*see* Apple *and* Pear
Interstocks for stone fruits, 2446
Ion absorption by plant cells, 1333
Iowa Div. Agric. St. Coll. and agric. Exp. Stat., A.R., 1267
Ipomoea—see also Pharbitis—
caerulea, 3969
horsfalliae, 1986
pulchella, 523b, 3947
superba, 3907
Ireland, fruit growing, 1391
Ireland, Republic of, Minist. Agric., A.R., 1285h, 3234i
Iridomyrmex humilis, 4127g
Iris—*see also* Bulbs—
breeding, 975o
bulb curing, disinfection and storage, 3983
bulb, enzyme activity in, 3982
diseases, 902, 3983
forcing, 915, 3981
nutrition, 3466
pests, nematode, 3984
photoperiodic responses, 3008

Iris (*continued*)—
rhizomes, cleaning, 3984
seed characters, 3007
soil management, weed control, 3600, 3633, 3635
species and varieties, 3007, 3981, 4030m
Iron—
chlorosis—*see also* Chlorosis, lime induced—a review, 3286
determination, 117p, 1308
foliar application, 1693, 1694
nutrition of—
fruit and plantation crops, evergreen, 1147, 1165, 1203, 2206, 2262, 3136
fruit trees, deciduous, 1348, 1447, 3466-3469
miscellaneous crops, 865r
ornamentals, 2047, 2952, 3466, 4003, 4010, 4019
plants, a review, 3286
small fruits, 332, 2511
vegetables, 1690, 1693, 1694, 3806
radioactive, 1308
root development affected by, 2080
sources, chelates, 90, 91, 332, 1147, 1307, 1447, 1693, 1694, 2047, 2084, 2085, 2511, 2952, 3060, 3136, 3466, 3467, 4003, 4010, 4050, 4051
uptake and metabolism, interrelationships with other elements, 947, 1165, 1348
Irradiation—*see under* Gamma, Light, Radiation *and* X-ray
Irrigation—*see also* Soil moisture *and* Water—
a bibliography on, 2312
canals, protective coatings for, 3315j
canals, weed control in—*see also* Weed control of particular types, aquatic—3613
of crops—*see also individual crops under* soil management—
fruit and nut trees, deciduous, 221, 222, 1060, 1448, 2616, 3292, 3320, 3386, 3387, 3484, 3489
fruit and plantation, evergreen—*see* Citrus, Coffee, Date, Olive *and* Sugar-cane
ornamentals, 958, 2969, 2970
small fruits—*see also* Strawberry *and* Vine—3422
tobacco—*see* Tobacco
vegetables—*see also* Beans (*Phaseolus*), Lettuce *and* Tomato—87, 561, 733c, 1253, 1688, 2747, 2860, 2864v, 3293, 3316i, 3780, 3798
disease incidence and resistance in relation to, 2616, 2872
economics, 85
equipment—*see also below*, methods—
nozzles, 3295
pipes and siphons, 1817, 2355, 4030g
in various countries, 1252, 1366
fertilizer application with, 86, 1358, 2305m, 2305r, 2306o, 3992
for frost protection—*see* Frost protection by sprinkler
Irrigation (*continued*)—
glasshouse and frame, 112, 1358, 3295
herbicide application with, 2711
insecticide application with, 2933
of lawns, 4030g
methods—*see also above*, equipment—
furrow, basin and other surface, 2355, 3292, 3386
mist—*see* Humidifiers
sprinkler, 86, 118 l, 765, 1252, 1353, 2356, 2357, 2847, 3066, 3293, 3294, 3315o, 3316i, 3316m, 3387, 4254s
sub-, for field or glasshouse crops, 112, 2747
trickle, 1354, 1815, 1816, 2847, 3223
microclimate affected by, 765
mucus control in pipes, 1817
needs, determination of, 1688, 2352, 2353, 2864v, 3315o, 3434, 4222
research in various countries, 1252
reviews on, 87, 3232
water—
from a colliery, 222
composition, 339, 3066, 3316k
distribution patterns, 3294
measurement, 3316n
from sewage, 1350
Isaria psychadae, 3932
Isonicotinic acid hydrazide in plants, 2128
Israel, agriculture, 1292
Israel, crops, 1078, 3322, 4035, 4128i
Italy, crops—*see also* Olive, Tobacco *and* Vine *under* growing—
fruit, 2420, 2503i, 2503n
nuts, 2558m
ornamentals, 2048, 2415a, 3042a
vegetables, 2415a, 2503n
Iva axillaris, 451
Ivy—
composition, 118b
growth, rejuvenation induced, 4020
leaf, cuticle, 2378
pests, 2962, 2964
physiology, 1867
propagation by seed, 2054i

Jacaranda pests, 3224
Jackfruit, fruit composition, 3186
Jamaica, crops, fruit, 2306j
Jamaica, Dep. Agric., A.R. and Investigations, 1268, 1285i, 4280, 4294i
Jaman (*Eugenia jambolana*), 3191k
Japanese beetle (*Popillia japonica*), 3041r, 3598a
Jasmine—
flower biology, 3041h
growing in Italy, 2048
propagation, vegetative, 962
Java—*see under* Indonesia
John Innes hort. Instn, A.R., 4281
Jordan agric. Res. Serv., A.R., 1269, 3218
Journal of Agricultural Engineering Research, a new periodical, 2336
Juglans spp.—*see also* Walnut—diseases, 3537
Jujube—*see Zizyphus*

Juncus spp., control, 2737i
Juniperus spp., pests, 2962
Juvenile forms in plants, 64, 559, 703, 704, 968, 1176, 1220, 1709, 2232, 3328, 4020, 4195

Kaki (*Diospyros kaki*)—*see* Persimmon
Kakivoria flavofasciata, 1062
Kalanchoë spp. (mainly *K. blossfeldiana*)—
  flower initiation, rootstock affects, 929
  forcing, 2950
  growing in window boxes, 1956
  mutations, 2023
  physiology, photoperiodic responses, 870, 2024, 3257, 3315y
  polyploidy induced, 2422
  rootstock-scion relationships, 929
  varieties, 870
Kale, composition, 3716
Kale, weed control, 2704, 3651
Kalmia angustifolia, 3619
Kapok, production and trade, 828
Kapok tree killing with herbicides, 1657
Kenaf (*Hibiscus cannabinus*), 1929, 1954q
Kentia spp., air pollution, 3246
Kenya—
  crops, 1070
  Dep. Agric., A.R., 1285j, 3219, 4283
  Sisal Res. Stat., Thika, A.R., 832
Kickxia arborea, 851
Kirton exp. Husb. Fm, N.A.A.S., 4294o
Klatemblachiella menthae, 3903
Kleinia aizoides, 3939t
Kohl-rabi—
  pests, nematodes, 550
  seedlings, raising of, 3703
  varieties, 732h
Kok-saghyz—
  climate, frost damage, 3918
  growing in various countries, 3210
  latex formation and yield, 3918
  latex rubber determination, 3191g
  nutrition, 2948 l, 3918
  physiology, enzyme activity, 3939v
  seed sowing, 3918
  seed treatment, 3918
  soil requirements, 3918
Kola—*see Cola*
Krym-saghyz, enzymes, 3939v
Krym-saghyz, latex formation, 3919
Kumquat—*see under Fortunella*

Labels, plant, 1374g
Laboratory design, a survey, 1291
Labour—
  conditions on tropical plantations, 1069
  efficiency—*see also* Economics—in horticulture, 1386, 2762, 2763, 3244, 3750, 3801, 3804, 3850, 3855y, 4292
  fatigue measurements, 2876
Lachnanthes tinctoria, 3620, 3621
Lactose in plants, 4255p
Lalang grass—*see Imperata*
The Lal-Baugh, a new periodical, 2338
Lampetia equestris—*see Merodon*
Land classification in Surinam, 1235c
Land clearing, machines for, 1235h
Lange Ossekampen central manurial trial grounds, A.R., 3234j
Lansium domesticum, 1233
Lantana spp., control, 3609, 3682, 3683
Lasioderma serricorne, 1902
Laspeyresia—see also Cydia—spp., unspecified, 628
Lausanne State féd. Essais agric., A.R., 2327
Lawn(s)—
  construction or re-establishment, 2015, 2016, 3013, 3990, 4030k, 4030w
  diseases, 926, 3014, 3993-3995
  grasses—
    Bermuda—*see Cynodon*
    in Hungary, 868
    Merion bluegrass (*Poa pratensis*), 925, 2017
    mixtures, 2017
    seed germination, 925, 3041x
  growth, maleic hydrazide retards, 3993
  irrigation system, 4030g
  management—
    cutting, 2017
    maintenance, 2015, 3013, 4030k, 4030w
    nutrition, 2017, 3992
    top dressing with vermiculite, 3990
    weed control, 447, 479-487, 523e, 1644, 2698-2702, 2733, 3625-3632, 3693f
  pests—
    ants, 4030a
    armyworms (*Spodoptera mauritia*), 3996
    beetle grubs, 3041r
    chinch bugs (*Blissus* spp.), 3997
    earthworms, 3998
    nematodes, 2018-2020
  putting greens, factors affecting quality of, 3991
Leaching by rain, 210
Lead toxicity, 783
Leaf(ves)—
  abscission—*see also* Defoliation—48-50
  air movement in, 1332
  analysis—
    figures—
      growth measurements compared with, 1180
      interpretation of, 1159, 1181, 1203, 2087, 2206, 2257, 2262, 2263, 2265, 2461, 4042, 4210
      variations due to various factors, 2206, 2264, 3136, 4043, 4044, 4047
    methods, 2415m
    sampling for, 117x, 3052, 3152, 3166, 3418, 4182
    spray residues affect, 3590
  anatomy, shading affects, 769
  area estimation, 2401
  area relationships, 2256
  cuticle, structure and composition, 2378
  cuttings—*see* Cuttings
  development in relation to shoot apex, 3316f
  disc cutting tool, 117x
  edible, of African plants, 3855o

Leaf(ves) (*continued*)—
nutrient absorption by—*see under* Nutrition, foliar
nutrient excretion or leaching, 2908o, 3278
shape, light intensity affects, 3969
surface, radiography of, 3312
temperature, factors affecting, 2366
Leafhoppers—*see also separate species under scientific names*—as virus vectors, 619, 974 l, 1640s, 2580, 3597j, 3714
Lecanium pruinosum, 2633
Lecanobius utilis, 4123
Leek—
growing in various countries, 642
nutrition, 3705
planting, spacing, 658
Leersia oryzoides, 3621
Legumes—*see also individual crops*—seed germination, 537
Lemon—*see under* Citrus
Lemon grass—*see Cymbopogon*
Lenticels, location of, 196
Lepidium spp., seed germination, 1324
Lepidosaphes beckii, 1019
Lepidosaphes spp., unspecified, 2117
Leptinotarsa decemlineata, 2864x
Lettuce—
breeding and selection, 3695
climate—
air pollution damage, 3248
frost resistance and protection, 682
light responses—*see below*, physiology
sun-burn injury, 683
diseases—
cause unknown, root rot, 684
control, general, 3807
fungus—
damping-off (various species), 1826
downy mildew (*Bremia lactucae*), 2864p
soil-borne, 2752
virus, big vein, 2830, 3808
virus, mosaic, 733e, 1795, 2830
economics, 1793, 3804
growing—
under glass, 1837d
in Holland, 680
under paper covers, 682
labour requirements, 3804
nutrition—
fertilizer placement, 2742
manuring and major elements, 681, 1689, 2790, 2959, 3704
minor elements, 1691, 3290, 3704, 3723, 3806, 4031c
sodium and salt injury, 1692
packing—
cooling, 3810
costs, 1793
crates, 1793, 1794, 3809
pests, insects, 1796, 1799, 2831, 2865p
pests, nematodes, 550, 3785
physiology—
photoperiodic and other light responses, 677, 2390, 3799, 3800, 3803
Lettuce—physiology (*continued*)—
photosynthesis, 3803
temperature responses, 679, 3223, 3800, 3803
transpiration, 2354
water relations, 719
planting—
dates, 3801
spacing, 3802, 3805
transplanting, 2831
root injury, sweet corn residues cause, 542
root system, 3223
seed—
germination—
biochemistry, 1330
factors affecting, 677, 791, 1792, 2390, 2395, 3298, 3799
respiration during, 1330
sowing depth, 2741
treatments—
pelleting, 678, 1791, 3804
various, 3701
vernalization, 679, 3800
seedlings, raising of, 3703
seedlings, thinning of, 3804
soil management—
irrigation, 719, 2747
rotations, 542, 2740
weed control, 2716, 3651
storage and transport—*see also above*, packing—685, 1793, 1794
varieties, in temperate countries, 532, 680, 1790, 3695
Leucopholis coneophora, 1139, 2202
Leucoptera (*Cemiostoma*) *scitella*, 1614
Leucoptera spp., on coffee, 4254a, 4283
Leveillula taurica, 2760
Lewisia spp., ornamental, 1956
Liberia, crops, 1234z
Libya, crops, 1068h, 1262
Lichens, antibiotics from, 3897
Light—*see also* Photoperiodism—
artificial—*see also* Forcing *and* Glasshouse illumination—
economics, 100, 2839
for grading produce, 802b
horticultural uses, reviews on, 1323
leaf temperature affected by, 2366
for plants—
dormancy breaking, 3338
ornamentals, 870, 895, 2969, 2979, 2980, 2985, 3042j, 3971, 3972, 4282
strawberries, 2521
vegetables, 701, 2780, 2838, 2839, 3825, 3826, 3829
vegetative propagation, 1962
sources of, 99-101, 2366, 2838, 2839, 3316o
coloured—*see also below*, infrared *and* ultraviolet—
for fruit ripening, 1025
plant responses to, 31, 1325, 1805, 2369, 2370, 3253, 3270, 3602
seed germination affected by, 3799
and darkness cycles, 1804

Light (*continued*)—
infrared and far-red, seed treatment with, 537, 2394
intensity—*see also* Shade—
changes, root growth affected by, 4015
chilling injury affected by, 1970
cuttings' responses, 73
plant responses—
essential oil plants, 3904
ornamentals, 31, 42, 892, 1979, 2973, 3969
temperate fruits, 1481
tropical and subtropical tree crops, 3068
various crops, 2941
vegetables, 537, 705-707, 3764, 3765, 3823, 3827, 3828
stomatal responses to, 2180
measurement, 99, 4288
moon, plant responses to, 3258
tissue culture responses, 1326
ultraviolet, diseases, virus, inactivated by, 802g, 2908r
ultraviolet, plant responses, 663, 3980
Lignin determination, 1703
Ligustrum obtusifolium, 2696
Ligustrum ovalifolium, 4011
Lilac—
diseases, virus, 964, 965, 2033
flower bud dormancy, 3252
flower colour, 3036
forcing, 3036
growing in Holland, 963
nutrition, 876
propagation, vegetative, 4009
varieties, 963
Lilium—see also Lily—*arboricola*, 2007
Lilium spp., hardiness, 975d
Lily—
breeding and hybridization, 914, 2422
bulb—
disinfection and heat treatments, 3010
root remnants removed from, 918
storage, 915, 2952, 3009
climate, frost susceptibility, 975d
diseases, fungus, 3010
diseases, virus, 917
forcing, 915, 3009
nutrition, 1966
pests, insect, 917, 1997
pests, nematode, 918, 3010
physiology, 916
planting time, 2952
pollen germination, 2387
propagation, vegetative, 914
seed production, 3011
storage—*see above*, bulb
variety trials, 975m
Yearbook, *R.H.S.*, 2007
Lily-of-the-valley, crowns, disinfection, 3012
Lime (*Citrus*)—*see under* Citrus
Lime (*Tilia*), flower bud dormancy, 3252
Liming—*see* Calcium, Soil pH *and crops under* nutrition
Limonium—see Statice
Linaria vulgaris, 451, 3682
Liriodendron tulipifera, 3035
Liriomyza langei, 1799
Liriomyza subpusilla, 1735, 1828, 3846
Listroderes obliquus, 733 l
Litchi—
climate, rainfall, 3105
climate, temperature responses, 1070
diseases, fungus, 1047
flower bud formation, 3105, 4114
flowering, factors affecting, 2129
fruit storage, 3106
growing in various countries, 1046
growth substance responses, 3105
nutrition, 4114
packing, 3120
pests, 2130, 2148s
propagation by grafting, 4113
propagation by marcots, 4032, 4113
ringing, 2129
soil, pH requirements, 3104
storage, 2131, 3221
Lithocolletis blancardella, 1614
Lithospermum officinale, 1954f
Lixophaga diatraeae, 1234c, 4254j
Lochnera rosea—see Vinca
Loganberry—
diseases, 386
fruit yield, growth substances increase, 2506
growing in various countries, 262, 2558h
soil management, weed control, 3600
Lolium spp. as lawn grasses, 2017
Lonchocarpus utilis, 3939i
Long Ashton agric. hort. Res. Stat., A.R., 1270, 4294k
Lonicera spp., forcing, 2032
Lonicera xylosteum, 849
Loquat pollen and pollination, 1424, 2473
Luddington exp. Hort. Stat., A.R. and guide, 3234k, 4294p
Luffa cylindrica, 829, 1954d
Lupin, air pollution, 2961
Lupinus termis, 854
Lycomarasmin—*see* Tomato diseases, fungus, wilt toxins
Lygus—
campestris, 3792
lineolaris, 417, 2640
oblineatus, 433
pabulinus, 1600
spp., unspecified, 1583, 2627

Macadamia—
growing in California, 2148n
growing in Hawaii, 4127o
herbicide injury, 1658
seed germination, 1272
Macaulay Inst. Soil Res., A.R., 3220
Machines and implements—*see also* Apparatus; Herbicides *and* Sprays *under* equipment; *and* Tools—
for compost preparation, 4276
decorticating, for fibres, 1929
dusting—*see* Dusters

Machines and implements (*continued*)—
fertilizer, for foliar application, 3315p
fumigating—*see* Fumigation, soil
grading, for fruit, 226, 2121, 2504h, 2504o
for grubbing trees, 4254k, 4255a
harvesting, for—
bulbs and corms, 1995
castor beans, 2943
fibres, 1929
fruit and nuts—*see under* Harvesting
pyrethrum, 847
seaweed, 865k
sugar cane—*see* Sugar-cane
tobacco, 2876, 3887
vegetables—*see under* Harvesting
hedge trimming, 1365, 3313
horticultural—
in Great Britain, 1361, 2407
in Holland, 1360
maintenance of, 1245
ladders, tractor-drawn, 2487
land clearing, 1235h
for mowing orchards, 2454
for oil extraction, 2218
packing, 1028, 1068u, 2412
planting, for—
bulbs, 1994, 2408, 4031p
sugar cane, 1235f
tobacco, 2408, 3886
trees, 2409, 4127r
various crops, 2408
vegetables, 2408
pruning, 987
seed threshing, husking or hulling, 2943
shredding or chipping pruning wood, 117s
soil block—*see under* Pots, soil
soil processing, 3692
staking, for tomatoes and beans, 2865z
for stringing tobacco leaves, 800
for sugar cane—*see* Sugar-cane *under* harvesting *and* machinery
for tea gardens and factories—*see* Tea machinery
trail making, 2655
for tropical crops, 847
for weed control, 1235h, 2736, 3692
winch for raising frame sashes, 113
Macrocystis pyrifera, 1944
Macropsis fuscula, 2580
Macrosiphum euphorbiae, 620
Macrosiphum solanifolii, 2857
Madagascar—
crops, 802a, 1130
flora, aromatic, 1954g
flora, useful, 2306e
Magnesium—
application, foliar, 214
content of plants, factors affecting, 1184, 2077
determination, 1309, 2416b, 3315i
interrelationships with other elements—*see also* Potassium nutrition—1065, 1182, 1184, 1753, 4042, 4182
Magnesium (*continued*)—
nutrition—*see also* Apple, Citrus, Tobacco, Tomato *and* Vine *under* nutrition—
of cuttings, 2434
of fruit and nut crops, deciduous, 1065, 2146, 3201
of fruit and plantation crops, evergreen, 1112, 1153, 1203, 1226, 2178, 2217, 2262, 3280, 4130, 4183
of hops, 838, 1256
of miscellaneous crops, 830, 865r
of ornamentals, 910, 2002, 4019
reviews on, 3201
of vegetables, 688, 1719, 1753, 3201, 3280, 3704, 3761, 3856r
Magnolia—
forcing, 2032
propagation, vegetative, 966, 967
species, varieties and hybrids, 4031f
Malacosoma neustria, 1277
Malaya, crops, 2305i
Malaya Dep. Agric., A.R., 1271
Maleic hydrazide—*see* Growth-substance compounds *and* Herbicide compounds
Mallotus philippinensis, 2944
Malpighia glabra, 3187
Malpighia punicifolia, 2305c, 3188, 3189, 3192d
Malus—see also Apple *and Pyrus*—
baccata, 164
micromalus, 3343
sieboldii, 1414
spp.—
apomictic, 968
disease resistance, 3343
forcing, 2032
sylvestris, 2415v
Mandarin—*see under* Citrus
Manganese—
absorption, factors affecting, 3316e
accumulation in soils, 2083
contents of plants, 1374c
interrelationships with other elements, 1182, 1753, 2206, 3138
nutrition of—
fruit and nut trees, deciduous, 337, 338, 3460, 3468
fruit and plantation crops, evergreen—*see also* Citrus nutrition—1203, 2206, 2262, 3136, 3137
ornamentals, 876, 4019
small fruits, 2549, 3460
vegetables and tobacco—*see also* Tomato nutrition—617, 688, 760, 1690, 1753, 1754, 3806
role in photosynthesis, 2371
sources, chelates, 617, 717, 3136
sources, oxides, 617, 717
toxicity, 338, 666, 1753
Mango—
climate, frost damage, 3192f
composition, fruit, 1152, 1155, 3146, 4178
diseases—
cause uncertain, 4179

Mango—diseases (*continued*)—
fungus—
anthracnose (*Glomerella cingulata*), 3217
Pestalotia mangiferae, 2215
powdery mildew (*Oidium* sp.), 3147
scab (*Sphaceloma* sp.), 3217
sooty mould, 4132
flower bud initiation and development, 4034
fruit(ing)—*see also above*, composition—
biennial, 4177
growth, 3145
necrosis, histological studies on, 3146
set, factors affecting, 1154
growing in India, 2310
growth cycle, 4177
nutrition, 976, 1153, 4179
pests—
cupmoth (*Scopelodes dinawa*), 1955a
fruit flies (*Dacus* spp.), 3122
hopper (*Idiocerus atkinsoni*), 4180
mites (various spp.), 3148
in the U.S.A., 3119b
pollen growth, temperature affects, 3144
pollination, 1154, 2214
propagation by budding and grafting, 2213, 4032
propagation by marcots, 2212
seed development, 3145
storage, 2215
varieties, 1152, 1155, 2212, 3191f
Mangroves, tannin from, 2947
Manihot dichotoma, 4199
Manila hemp—
pests, 1271, 1955a
production and trade, 828
research in the Belgian Congo, 1265
research in Costa Rica, 4279
varieties, 1271, 3908
Manilkara balata, 4199
Manuals and other books—*see also* Reviews, book—on—
algal culture, 861
biochemistry, 1244
buildings, farm, 2314
cells, cultivation of, 1285u
chromatography, 2316
chromosome atlas of flowering plants, 4258
cloche cultivation, 2340j
coffee, 4257
diseases and their control in general, 4263, 4294a
entomology—*see below*, insect, *and under* pests
evolution, plant, 4259
fruit growing, 2310, 4294a
fruit tree training, 3207
fungi, root-infecting, 2313
gardening—*see* Gardening *and below*, rock
gladiolus, 3206
Hemiptera, 3194
herbs, 4261, 4267
hevea, 4264
horticultural science, 1241
insect ecology, 1285b
Manuals and other books on (*continued*)—
insecticides, 3203
machines, horticultural, 1245
medicinal plants, 4267
nut growing, 2317
palms, 4266
pear growing, 2308
pests and their control in general, 4263, 4294a
photosynthesis, 2315
plums, 4262
propagation of horticultural plants, 1236, 1254, 4270
rock gardens, 1250
seed identification, 1238
soil sterilization, 2318
soilless culture, 2311
statistical design and analysis, 1251
strawberries, 4294a
tea growing, 3177
tobacco, 1237
vegetable growing, 527, 1253, 1787, 4261
virus diseases—*see* Virus diseases
viticulture and vine varieties, 1242, 1249
water plants, 3204
Marasmius perniciosus—*see* Cacao diseases, fungus, witches' broom
Marcotting—*see also* Cuttings, aerial roots—
growth substances for, 318, 944, 967, 2212
mist for hardening, 4113
ornamentals, 944, 967, 2037
plastic covers for, 944, 4113, 4251
subtropical fruit trees, 4032, 4113
sugar cane, 4254h
temperate fruit and nut trees, 318, 2503u
tropical fruit and plantation trees, 1137, 2212, 3190, 4251
Marigold—*see also Calendula and Tagetes*—
diseases, bacterial, 1941
Marigold seed treatment and germination, 2955, 3947
Maritime region. Lab., Halifax, N.S., work at, 1945
Marketing—*see also* Packing—
flowers—*see* Flowers, cut
fruit, 118k, 260k, 2504e, 4286
holly, 960
hops, 865p
horticultural produce in the U.S.A., 3231
nuts, 3456r
oil-seed crops, 3923
rhubarb, 1778
vegetables, 118k, 732e, 4286
Marrow—*see also* Cucurbits *and* Squash—
diseases, 2782
seed treatments, 2750
as tomato rootstock, 2835
varieties, 2865y
Marssonina panattoniana, 2829, 3855m
Martinique, crops, 1079, 1234m
Massachusetts agric. Exp. Stat., A.R., 3222
Matthiola—*see* Stock
Mauritius—
crops, 1903b

Mauritius (*continued*)—
Dep. Agric., A.R., 4284
insect pests, 3121
Sugar Ind. Res. Inst., A.R., 3161
Medicago denticulata, 3388
Medicago tribuloides, 3388
Medicinal plants—*see also* Alkaloids, Cortisone, Sapogenins, steroidal, *and entries under* Fig, Garlic, Papaw *and* Poppy *and species of Agave, Alstonia, Artemisia, Cissampelos, Cyperus, Datura, Dioscorea, Hippophae, Kleinia, Rauwolfia, Strophanthus, Tabernanthe, Tanectum and Verbascum*—
a book on, 4267
chemical research on, 3316c
a review on, 865t
in various countries, 813-815, 1954w, 2912, 3939j, 3939r, 4267
Mediterranean fruit fly—*see Ceratitis capitata*
Megaphynium macrostachyum, 4166
Megaselia sp., on mushroom, 639
Melanagromyza phaseoli, 2153
Meliola butleri, 1013
Melissopus latiferreanus, 422, 1613
Melittia cucurbitae, 3746
Meloidogyne—
arenaria, 1998
hapla, 2617, 2756, 2866n, 3002
incognita, 590, 1895, 1896, 2618, 2856, 2974, 3002, 3984
javanica, 1894
spp., unspecified, 790, 798, 3002, 3539, 4291
Melon (cantaloupe and musk)—*see also* Cucurbits *and* Water-melon—
climate, temperature responses, 3251
composition, fruit, 263
diseases—
antibiotics for the control of, 1734
fungus—
downy mildew, 3742
fusarium wilt (*F. oxysporum*), 1733
powdery mildews (*Erysiphe* and *Oidium* spp.), 1732, 3743
rot (*Colletotrichum lagenarium*), 2659
virus, 1730
fruit—*see also above*, composition—quality, factors affecting, 2785
fruit respiration, 1728
growing in various countries, 3856g, 3856y
harvesting, 3750
hybrid vigour, 533
marketing, 732e
nutrition, 1729, 2959, 3704
packing and grading, 2865t
pests—
beetles, 1735
fly (*Dacus cucurbitae*), 591, 3593
insects, various, 732m, 1735, 1828, 3846
mites, 1735, 1736
nematodes, 590, 1735
seed treatment and germination, 537, 2659
soil—
management, heating, 4282
Melon—soil (*continued*)—
management, weed control, 2678
requirements, 589
storage, 2785
varieties, 533, 588, 1730, 4285
Mentha spp.—*see* Mint
Mercurialis annua, 1645
Mercury injury to plants, 3020
Merodon equestris, 920, 974w, 2009, 2054k
Mespilus germanica, 125
Metagonistylum minense, 1234c, 4227, 4254j
Metaldehyde, residue determination, 3596
Metaphycus lounsburyi, 4123
Metarrhizium anisopliae, 4131
Metasequoia glyptostroboides, 4031b
Metatetranychus—
citri—*see* Citrus pests, mite, red
ulmi (=*Paratetranychus pilosus*), control, biological, 1586
ulmi control, chemical, 399, 400, 406, 1513, 1583, 1629, 2621-2625, 2633, 2646, 3540, 3541, 3544, 3575, 3598s
Meteorology—*see also* Climate—agricultural, 1297
Metroxylon spp., sago palms, 3191t
Mexico, crops, 1068m, 2306h, 2503f, 3191e, 4127d
Mica in potting composts, 1969
Michigan agric. Exp. Stat., A.R., 1285 l
Microcerotermes sp. on tea, 1234p
Micro-climate—*see* Climate
Microphanurus basalis, 3224
Microtermes obesi, 2279
Middle East, scientific papers published in, 7
Milletia occidentalis, 865j
Mimaulus thesii, 1898
Mimosa—
invisa, 2248
pudica, 3648
sp., seed germination, 1963
Mimulus guttatus, 2054j
Mimusops roxburghiana, 4255p
Mineola vaccinii, 2513
Mineral nutrition—*see* Nutrition
Minnesota agric. Exp. Stat., A.R., 1285m
Minor elements—*see also separate elements, and* Deficiencies, Nutrition, *and crops under* nutrition—
deficiencies in—
Australia, 1695, 3316j
South Africa, 3460
New Zealand, 1515
in plant nutrition, 117a, 2415t, 3195
in the soil, reviews on, 1247
Mint (peppermint, spearmint and other *Mentha* spp.)—
composition, 29, 1922, 3901
economics, 3940a
enzymes, 3939w
flower bud initiation, 3902
growing in various countries, 1269, 3940a
harvesting, 1923
hot-water treatment, 2410
nutrition, 1922, 3218

Mint (*continued*)—
oil, essential, 1922, 1923, 3902, 3904, 3905
pests, 1924, 3903
physiology—
light intensity responses, 3904
photoperiodic responses, 3901
temperature responses, 3901, 3902
planting, transplanting, 3218
Mirabilis jalapa, 3947
Mist sprays—*see also* Cuttings *and* Humidifiers—for hardening marcots, 4113
Mist sprays, seed germination under, 2955
Mites—*see also scientific names, and crops under* pests—
control—*see also* Acaricides—
biological, 402, 1586, 1588, 1591, 1736, 2619, 3576
on deciduous fruit and nut trees, 2670i, 2670k, 3546
on ornamentals, 879, 974x
populations, estimation of, 4088
populations, factors affecting, 1584
virus-like symptoms caused by, 1821
as virus vectors, 1547
Mitochondria, plant, 37, 41, 2373, 2415u, 3835
Mitochondrial respiration, 1329
Molybdenum—
determination, 2415z, 3315c
interrelationships with other elements, 3138
nutrition—
of fruit and plantation crops—*see also* Citrus nutrition—2059, 3470
of hops, 839, 1256
of ornamentals, 3032
reviews on, 2361-2363, 2416d
of tobacco, 760, 1256
of vegetables, brassicas—*see* Cauliflower nutrition
of vegetables, various, 666, 1256, 1691, 1729, 1752, 2866c, 3708, 3723, 3762
Momordica charantia, 537
Monilia—see also Sclerotinia—roreri, 1119, 2187, 2306c, 3129
Monkey control, 2154, 2155
Monocotyledons, grafting, 1272
Moonlight, plant responses to, 40, 3258
Morning glory, 523b, 3947
Morocco—*see also* Africa, North—crops—
castor bean, 855
fruits, 117c, 3119d
vegetables and flowers, 117c, 2834, 3776, 3856e
Mouse—*see under* Rodents
Mozambique, crops, 1235i
Mucilages, plant, chemistry of, 3939b
Mucilages, plant sources, *Plantago* spp., 833, 834
Mucuna enana, 2305b
Muehlenbergia sylvatica, 3621
Muelleria frutescens, 1938
Mulberry—
climate, air pollution, 1640r
composition, leaf, 3408w
growing in various countries, 125
species and varieties, 192, 1407, 3333
Mulching—
crops—*for individual crops see each under* mulching *or* soil management—
fruit and plantation crops, evergreen—*see also* Coffee—832, 988, 1109, 1217, 2930, 3230, 4194, 4205, 4206
fruit trees, deciduous, 209, 1060, 1380, 1381, 2455, 2456
ornamentals, 2991
small fruits—*see also* Strawberry—1501, 2511, 2539, 2551, 3423
various, 2869, 2937
vegetables—*see also* Tomato—2748, 3707, 4291
disease control by, 1568
materials—
bagasse, 3707, 4206
cellophane flakes, 2960
chaff, 2991
grass, 3136, 3707, 4205
paper, 1667
plastic, 1568, 2748
reeds, 2991
sawdust, 1256, 2349, 2511, 2991, 4194
sisal waste, 2930
wood shavings, 988, 2349
sod—*see under* Cover crops
soil characters affected by, 3200
stubble-, 3200
for weed control, 1667
Murraya koenigii, 29
Musa—see also Banana *and* Manila hemp—*fehii*, 1917
Mushroom (mainly *Agaricus* (*Psalliota*) spp.)—
bed casing, 1768, 2864t
diseases—
cause uncertain, 1769
chlorinated water to control, 1770
fungus, 638, 2811
general, 732w
growing, a bulletin on, 1766
houses, heating, 636
houses, insulation, 109
nutrition, major and minor elements, 636
pests, insects, 639, 733f
pests, nematodes, 638, 733f, 2812
research in Germany, 2809
species of genera other than *Agaricus*, 3773
spore germination, 637, 2810
spray residues, 640
strains, 1767
Musschia wollastonii, 896
Mustard—
composition, 545
spray residues, 733g
varieties, 1947
weed control, 3651
Mutations—
induced, in fruit plants, 130, 131, 1395, 1396, 2421, 2504 l, 3329
natural in—
fruit plants and nuts, 132-134, 1394, 2428, 2429, 2558c, 3335, 3408z, 4127 l

Mutations—natural in (*continued*)—
ornamental plants, 1972, 2023
vegetables, 1710, 1803
Myceliophthora sp. on mushroom, 638
Mycorrhiza of plants, 319
Mycosphaerella—
fragariae, 3459
musicola—*see* Banana, diseases, fungus, leaf spot
pinodes, 2781
Myelois ceratoniae, 3208
Myelois venipars, 3550
Myosotis—*see* Forget-me-not
Myrciaria glomerata, 4252, 4253
Myrocarpus frondosus, 865s
Myzus cerasi, 1621
Myzus persicae, 410, 732j, 733e, 782, 1513, 2962, 3885, 4131

Naaldwijk Res. Stat. Fruit Veg. Cult. under Glass, A.R., 3223
Nandina domestica, 2049
Naranjilla (*Solanum quitoense*), 3119o
Narcissus—*see also* Bulbs—
bulb sterilization, 920, 2009, 2054k, 2410, 3004
diseases, fungus, 1274
diseases, virus, 902
flowers, cut, prolonging life of, 3985
forcing, 919
pests, insect, 920, 974w, 2009, 2054k
pests, nematode, 921, 3004
soil management, weed control, 3600, 3633, 3635
varieties, 2053o
Year Book, R.H.S., 2008
Nasinovia ribis-nigri, 2831
Nasturtium, diseases, fungus, 3947
Nasturtium, seed treatment, 3947
National—
Fruit Trials, England, 3320
Horticultural Magazine, anniversary issue, 1956
Inst. agric. Bot., Cambridge, A.R., 3856c
Inst. agric. Bot., Cambridge, vegetable trials, 3695
Nectandra rodioei—*see Ocotea*
Nectar—
composition, sugar content, 1429
plants of Paraguay, 1073
secretion by plants, 18, 969, 973, 1426-1428, 1468 l
Nectarine—
growing in various countries, 2503j
pruning, 2463
temperature responses, 2571
varieties, 1393
Nelspruit, Citrus subtrop. hort. Res. Stat., 4127w
Nematode(s)—*see also individual species*—
choice of cover crops in relation to, 4094
control—
by BHC, 396
biological, 395, 3085
Nematode(s)—control (*continued*)—
by burning brushwood, 782
by 3-p-chlorophenyl-5-methyl rhodanine, 1580
by chloropicrin, 550
by D-D, 549, 1579, 2820, 3785, 3851, 4291
by dibromochloropropane, 2617, 2618, 2820, 3539
by 1,2-dibromoethane, 3785
by electricity, 2856
by formaldehyde, 3004
by fumigation of seed, 2815
by fumigation of soil, general, 590, 2901
by fungicide-nematocide combinations, 1581
by hot-water treatment, 397, 1998, 2330, 2410, 3010, 3589
by hydrogenated fish oil, 2115
under living trees, 2114, 3539
by mercurial compounds, 2330
by methyl bromide, 2815, 2974
by parathion, 3003
a review on, 1624
by root pruning, 3984
by sodium 2,4,5-trichlorophenoxide, 3004
by "solubilized" chemicals, 549
by systemic insecticides, 3003
by various nematocides, 2019, 2020, 3016
of crops—*see also* Tobacco pests—
a catalogue of, 4260
fruits and nuts, deciduous—*see also* Strawberry pests—207, 396, 397, 1578, 1640i, 2330, 2618, 2670x, 2671q, 3539
fruit and plantation crops, evergreen—*see also* Citrus pests—2067, 2148s, 2173
lawns, 2018-2020
ornamentals—
annuals, biennials and herbaceous, 2974, 4030d, 4031r
bulbs and tubers, 918, 921, 1998, 3002-3004, 3010
woody, 2774
vegetables—*see also* Mushroom pests *and* Tomato pests—590, 638, 732s, 1735, 1761, 2756, 2774, 2775, 2815, 2820, 3785, 3851
host nutrition relationships, 1761
a repellent for, 2866n
seed-borne, 4030d
soil sickness relationships, 2561, 3538
Nematologica, a new periodical, 2339
Neocleora tulbaghata, 3224
Neorhizoecus spp., unspecified, 4173
Nepenthes spp., pitcher secretion, 1987
Nephantis serinopa, 2202
Nephelium lappaceum, 4129
Nephthytis liberica, 2956
Nepticula malella, 1614
Nerine spp., alkaloids, 865x
Neurotoma nemoralis, 3565, 3566
New Guinea, British—*see* Papua and
New Hampshire agric. Exp. Stat., A.R., 3227
New York St. agric. Exp. Stat., A.R., 1285n

New Zealand—
crops, 1256, 1515, 2504y
Dep. Agric., Hort. Div., A.R., 2329
D.S.I.R., A.R., 1261
medicinal plants of, 3939j
minor element deficiencies, 1515
plant protection, 1640e
weed control, 3603
Nezara viridula, 1827, 3224
Nickel toxicity, 718, 3287
Nicotiana—
acuminata, 1848
bigelovii, 1848
glauca, 773, 1848, 2378, 3875
glutinosa, 1846, 1849, 1850, 1885, 3251, 3874, 3879
longiflora, 1849
otophora, 1848
rustica, 767, 773, 777, 3871, 3876
spp.—
alkaloids—*see also* Tobacco, composition, alkaloids—3874, 3875
grafting, intergeneric and interspecific, 773
taxonomy, 1239
tabacum—*see* Tobacco
tomentosiformis, 1848
Nicotine and nornicotine—*see also under Nicotiana* spp., alkaloids, *and under* Tobacco, composition, alkaloids—
biosynthesis, 773, 777, 2884, 3871, 3875
content of plants, factors affecting, 2870
conversion during tobacco curing, 3891
determination, 776, 2885, 3870
Nicotinic acid in plants, 2128
Nidularium innocentii, 2022
Nigella damascena, 2948w
Nigeria, crops, 1681
Nigeria Dep. Agric. Northern Region, A.R., 2340h, 4294q
Niphadolephis alianta, 4283
Nitrite, infection of roots by fungi affected by, 2065, 3044
Nitrogen—*see also* Ammonia, Nitrite, Urea *and other organic compounds, and separate crops under* nutrition—
absorption by different plant surfaces, 2079
absorption, growth phase of plant affects, 840
content, rainfall affects, 2870
deficiency, nutrient distribution in plants affected by, 4182
determination, 3192b, 3279
fixation by legumes, 1751
foliar application—
of compounds other than urea, 2549, 4206
pump for, 3315p
of urea—*see* Urea
metabolism in plants, 333, 1310
nutrition—
of flower crops, 1966
flower induction affected by, 1168
fruit set related to, 3053
of glasshouse crops, 3302
iron in relation to, 1165
Nitrogen—nutrition (*continued*)—
phosphorus in relation to—*see* Phosphorus nutrition
plant analysis as a guide to—*see also under* Leaf analysis—2259, 2262
potassium in relation to—*see* Potassium nutrition
shade affects, 1106, 1107, 2288
radioactive, 2264
sources—*see also* Urea—
ammonium—
compounds compared, 3855v
lime reduces injurious effect of, 1349
and nitrate compared, 1065, 1184
anhydrous ammonia, 1689
aqua ammonia, 2306o
latex skim serum, 4194
organic materials, 2055
various, comparisons between, 2081, 2146, 3054, 3055
translocation in plants, 2264
Nornicotine—*see under* Nicotine
North Africa—*see* Africa, North, *and separate countries*
North of Scotland Coll. Agric., guide to, 1275, 4294r
Norway, crops, fruit, 3408b, 3408k, 3408s
Notholirion campanulatum, 2007
Nottingham Univ. School Agric., A.R., 4292
Nungua agric. Res. Stat., Gold Coast, guide to, 1072
Nursery(ies)—
economics, 1957
pest control, 4127p
practices, books on, 4270
soil sickness, 2330, 4282
stock—*see also individual species*—
defoliation, chemical, 4012
frost protection of lifted, 2956
growing in containers, 975j, 3952, 4030h
packing, 880, 881, 2956
plastic or wax coatings for, 1100, 3016
production of disease-free, 3946
storage, 881, 3351, 4030 l
in various countries, 2053k
Nut(s), a book on, 2317
Nut(s), varieties, 3325
Nutgrass—*see Cyperus* spp.
Nutrient(s)—*see also separate elements*—
absorption and translocation, 96, 837, 840, 1182, 1333, 1374n, 2079, 4048
distribution during development, 1304
excretion by and leaching from leaves, 210, 2908o
mist, plants grown in, 871, 3833
solutions—*see also* Soilless culture— propagation of cuttings in, 1965
solutions, salt concentration of, 118d
Nutrition—*see also* Fertilizers *and individual nutrients*—
books on, 88
of crops—*see also below*, foliar, *and separate crops under* nutrition—fruits, 1468i, 2504t, 2504u, 3381

Nutrition (*continued*)—
of crops, vegetables—*see* Vegetables
as an electrical phenomenon, 96
foliar—*see also* Urea—
flowering induced by, 3070
general, 1374e
herbicidal application combined with, 3687
with minor elements—*for compounds commonly applied in this way see under separate elements*—308
with nitrogen compounds—*see* Nitrogen, foliar, *and* Urea
with phosphatic compounds—*see* Phosphorus application
of plants—
deciduous fruits—*see also* Apple, Pear *and* Vine *under* nutrition—1443, 3384, 3597 l
evergreen fruit and plantation crops—*see also* Citrus nutrition—976, 4206, 4234
vegetables, 1693, 1694, 1750, 2832, 3223, 3719, 3737
pump for, 3315p
root nutrition compared with, 2022
growth measurements in relation to, 1180
by injection into plants, 2084
by injection into subsoil under fruit crops, 3380
radioactive isotopes used in—*see* Radioactive
reviews on, 88, 1374r, 2358, 2416g, 3315n
of tissue cultures, 1374i
Nutritional value of crops, 544, 571, 3263
Nyasaland crops, 4254y
Nyctanthes arbor-tristis, 2053i
Nygmia phaeorrhoea, 3598t

Oak trees, eradication of undesirable, 464, 470
Oat, wild—*see Avena fatua*
Ocimum spp., essential oil plants, 826
Ocotea (=*Nectandra*) *rodioei*, 1914
Octoploid plants, 2967
Oenothera spp., breeding, 3042k
Oidium—*see also under hosts and scientific names of perfect forms*—
ambrosiae, 3743
begoniae, 2984
heveae—*see* Hevea diseases, fungus
spp., unspecified, 379, 3147
Oiketicus kirbyi, 407
Oil(s)—
drying, reviews on, 1954s
essential—*see* Essential
fruit—
extraction methods, 1056
oil palm—*see Elaeis* palm oil
olive—*see* Olive
pili-pulp from *Canarium ovatum*, 865n
plants in Latin America, 852, 2306h
production and trade, world, 1263
reviews on, 2948m
Oil(s) (*continued*)—
seed or kernel—
from delphinium, 3041n
from euphorbiaceous plants—*see also* Castor *and* Tung—2944, 2945, 2948t
extraction, 2218, 4154
insecticide synergist in, 2940
from leguminous plants, 854, 2948r, 3939k
from palms—*see also* Coconut *and Elaeis* —853, 2948v, 3925
passion fruit, 1059
ramie, 1946
safflower, 1954s
from *Santalum* spp., 2948i
sesame, 2940
tobacco, 1954s
from various tropical plants, 854, 3907 3928
walnut, 750, 1954r
Okra (*Hibiscus esculentus*)—
breeding, 641
composition, 545, 3939b
seed germination, 536
spray residues, 1701
Oligonychus indicus, 2277
Oligonychus punicae, 2066
Olive—
a bibliography on, 1049
climate—
chilling requirements, 2136, 4116
frost protection, 1053
frost resistance and injury, 2137, 4117, 4127v
temperature responses, 1070
composition, fruit, 1054
diseases—
fungus—
fungicides for, 3598h
leaf spot (*Cycloconium oleaginum*), 3113
sooty mould, 2660
non-parasitic, 2138, 2139, 3110
flower—
abortion, 4119
biology and morphology, 4128d
bud differentiation, 4116
fruit—
composition, 1054
drop, growth substances induce, 3112
growth, cyclic, 1054
set, 4121, 4127k
growing—
in Central and South America, 1048, 1068m, 2306h, 4127d
in European countries, 1068 l, 2148c
in North Africa, 1262
harvesting, mechanical, 2141
leaf-flower bud ratio, 4119
nutrition—
boron, 2138, 2139, 3111
salt tolerance, 4118
soil nutrients in old groves, 3110
oil—
Bellier indexes, 3107

Olive—oil (*continued*)—
contamination by sprays, 2148v, 3112, 3113
content, 1052, 1054, 3109, 4121
extraction, 1056, 2148h
production and trade, 1263, 1954r, 2148c
quality determination, 3119p
pests—
fly (*Dacus oleae*), 1055, 2140, 2148d, 3113, 3114, 4122
general, in various countries, 1699, 3598h
moth (*Prays oleellus*), 3115
scale insects, 3116, 4123, 4127n
physiology, water relations, 1052
pollen germination, 4120
propagation by cuttings, 1050, 1051, 3340
propagation by grafting, 3108, 4115
research in various countries, 3208
ringing, 4121
seed germination, 4116
soil—
management, earthing up, 1053
management, irrigation, 87, 1052, 3109
nutrients in old groves, 3110
varieties—
classification and identification, 2132, 4128d
frost resistant, 4117
in Italy, 1068t, 2133, 2134
salt tolerance, 4118
in various countries, 1048, 2135, 3107
Onion—
bolting, 1773, 2738
breeding and selection, 643, 2814, 2865d, 3695
bulb—*see also below*, packing—
anatomy and development, 647
bruising, 3782
composition, 648, 1837q, 2744, 3781
dormancy—
growth substances prolong, 651, 1774, 2758
irradiation prolongs, 1775
scale growth during, 3779
formation, factors affecting, 645, 646
storage, 649, 650, 1772, 1773, 1776, 1837q, 3778, 3779, 3782
climate, frost resistance, 643
composition—*see above*, bulb
cytology, 1344, 2387
disease(s)—
fungus—
blast or leaf spotting (*Botrytis* spp.), 546, 2816, 3784
downy mildew (*Peronospora destructor*), 654, 656, 3783, 3784
neck rot (*Botrytis* spp.), 650, 654
smudge (*Colletotrichum circinans*), 655
white rot (*Sclerotium cepivorum*), 1837e, 2817
resistance, 3774
growing in the sub-tropics, 644, 2866 l, 3776
growing in temperate countries, 642, 2864z
growth, tillering, 2866r
Onion (*continued*)—
nutrition—
fertilizer placement, 2742
manuring, 1257, 2322, 2744, 3209
minor elements, 3704, 3781
nitrogen, 652, 2813, 3855v
phosphorus, 652
potassium, 3704
packing, 530
perennial, 3264
pests—
flies (*Delia* and *Eumerus* spp.), 657, 1698, 2818, 2819, 3712, 3713, 3856q
mite (*Rhizoglyphus solani*), 732z
nematodes, 2756, 3785
thrips (*Thrips tabaci*), 546, 733a, 1257, 3222, 3784, 3855d
physiology—
enzyme activity, 1772, 2374, 2376
light responses, 645
respiration, 43
temperature responses, 646
tissue culture, 43, 46, 2379
planting—*see also below*, sets—
machines for, 4031p
spacing, 2813
time studies, 3777
pollination, 2814
research in various countries, 2739
root(s)—
anatomy, 733b, 3856n
growth, 46
injury, sweet corn residues cause, 542
oxygen absorption by, 43, 2379
water absorption by, 2379
seed—
germination, 537
production, 534, 3778
sowing depth, 2741
sowing, time of, 643
storage, 538, 1684
testing, 3775
treatment, 525, 2815, 3781
sets, 2738, 3781
soil management—
irrigation, 653, 1688, 3780
rotations, 542, 2740
weed control, 494, 507-510, 1672, 2713-2715, 2734, 2737m, 3600, 3667-3673, 3693i
spray injury and residues, 548, 3784
storage—*see above*, bulb *and* seed
varieties, general, 525, 530, 1771, 2865j, 3695, 3774
varieties from hybrid seed, 533
Welsh (*Allium fistulosum*), 537, 2866r
Onoclea sensibilis, 3621
Operophtera brumata, 1612
Opuntia spp., control of undesirable, 1648
Orange—*see under* Citrus
Orbignya spp., by-products following oil extraction, 1955b
Orchard—*see also* Fruit *and separate crops*—
soil management, 120, 220, 329, 448, 2451, 2503y, 3292, 3381, 3390

Orchard survey methods, 4127z
Orchid(s)—*see also individual genera*—
flower storage, 3960
nutrition, 2021
watering, 2021
Ornamental plants—*see also* Flowers, Pot plants *and separate plants*—
bog, 975b
in Canada, 4031e
climate—
air pollution, 2961
frost injury and hardiness, 974o, 3041m, 3958, 4030i, 4030u
glasshouse and natural, 974t, 1960
phenological records, 1430, 2958
coniferous—*see* Conifers
for desert areas, 1959
diseases, 3946, 3947
economics, 1957
foliage, 866
forcing—*see* Forcing
nursery stock—*see* Nursery
nutrition, 90, 871, 875, 876, 975a, 3042b, 3466
packing—*see under* Packing
pests, 1968, 3222, 3959
propagation, 871, 872, 1965, 3946, 3949
research in various countries, 2951
seed longevity, 3041 l
soilless culture, 98, 875
thermal waters used for, 3955
in the tropics and sub-tropics, 866
variety collections, 3235
variety register, 3945
woody—*see* Trees and shrubs
Orobanche spp. and their control, 456, 457, 523p, 1646
Orthesia insignis, 2053z
Orthocraspeda trima, 4130
Orthomorpha coarctata, 2210
Orthosia spp., unspecified, 2648
Oryctes rhinoceros, 2153, 2202, 4130
Osmotic pressure—
drought and water supply relationships, 1532
growth substances affect, 3261
of soil solution, 2350
Otiorrhynchus spp. and their control, 878, 2637, 2671f, 3551
Ottawa centr. exp. Farm, Rep., 2320, 3212
Oxalic acid contents of plants, 2146, 3277
Oxalic acid determination, 3892o
Oxalis spp. as—
food plants, 672
ornamentals, 922
weeds, 3649
Oxygen uptake by roots, 43, 2379
Oxynicotine determination, 1877
Oyster nut (*Telfairia pedata*), 3926
Ozone injury to plants—*see also under* Air pollution—25, 3245, 3248
Ozone used in storage, 3397

Pachira aquatica—see Bombax sessile
Packing—*see also* Grading, *and individual crops under* packing—
Packing (*continued*)—
containers—
bags (packages) for—
banana bunches, 2159, 3191c
citrus, 1068e
flowers, 891
litchis, 2131
plants, 880, 881
spinach, 690
bulk, for fruits and vegetables, 1029, 1068j
cartons for—
citrus, 1028, 4103
holly, 960
tropical fruits, 1077
vegetables, 3809
fruit physiology affected by, 228
transport of, 1029, 2488
various for—
apples, 227
bananas, 1087
flowers, 4031q
fruit, general, 5, 2489
peaches, 2490, 2491
pineapples, 1172, 1173
small fruits, 269
tropical fruits, 1077
vegetables, 1718, 3809
economics of, 1172
house, construction and layout, 227, 3238, 4286
house equipment, 227, 1028, 1068u
machines, prepacking, 2412
methods—*see also individual crops*—for—
fruit, bulk handling, 4098
fruit, general, 3303, 4286
vegetables, general, 3303, 4286
Paeony—*see* Peony
Pakistan—
crops, deciduous fruits and nuts, 119, 1235t, 2503o
crops, evergreen fruit and plantation, 1235t
medicinal plants, 2912
vegetable research, 528
Palestine—*see* Israel
Palms—*see also individual species*—
a book on, 4266
ornamental, 2030
species in various countries, 860
Palpozenillia palpalis, 4227
Pammene argyrana, 2670u
Pammene rhediella, 3564
Pandanus spp., fruit uses and composition, 2304
Panicum spp., control, 458, 1658
Pansy—*see under* Viola
Pantorhytes plutus, 2153
Papain—*see* Papaw products
Papaver—see Poppy
Papaw (*Carica papaya*)—
breeding and genetics, 3192g, 4255h
climate, frost damage, 3192f
diseases, fungus, 3154
fruit—
composition, 2221, 3191s
fumigation, 2222

Papaw—fruit (*continued*)—
storage, 2222, 3154
vapour-heat treatment, 2222, 3154
fruiting failure, factors affecting, 2220
latex, anticoagulant factor from, 1954u
latex, enzyme activity during collection, 2306r
products, papain, 1163, 3155
sex expression, 1235d
varieties, 3192i, 4255o
Paper from various plants, 1089, 3906, 3939m
Paprika—*see under Capsicum*
Papua/New Guinea, economic entomology, 2153
Papua/New Guinea, medicinal plants, 814
Parabryocoropsis sp. on cacao, 2153
Paraguay, honey and pollen plants, 1073
Paraphytoptus chrysanthemi, 1982
Parasa vivida, 4283
Paratetranychus—see also Mites—
bioculatus, 2293
citri—see Citrus pests, mite, red
ilicis, 879
pilosus—see Metatetranychus ulmi
ununguis, 879
urticae—see Tetranychus
Paria canella, 408
Parietaria numularia, 2727
Parlatoria blanchardi, 4128k
Parlatoria camelliae, 2117
Parmelia vagans, 3897
Parsley, seed storage, 538
Parsnip—
composition, 2864a
growing in various countries, 2865q
physiology, 3693g
seed storage, 538
Parthenocarpy—
induced—*see also* Growth-substances, fruit set—in cucurbits, 592
natural in—
apple, 3330
coffee, 4156-4161
pear, 2472, 3330, 3353
tobacco, 2878
Parthenocissus tricuspidata, 1326
Paspalum repens, 3612
Passiflora caerulea, 1057
Passion fruit (mainly *Passiflora edulis*)—
by-products, 1059, 2143
diseases, fungus, 1058
fruit composition, 1059, 2143
fruit storage, 4124
growing in various countries, 1057, 1068k
pruning, 2142
rootstocks, 1057
seed oil, 1059
Pasteur effect in plants, 1316
Pea—
breeding and selection, 3695
climate—
microclimate, responses to, 1747
temperature responses—*see below*, physiology
Pea—climate (*continued*)—
temperature sums for, 1747
composition—
seed and pod—
carbohydrates, 605, 1744, 1745, 3759
enzymes—*see below*, physiology
as index of maturity, 612, 614, 3759, 3771
nitrogen compounds, 605, 1743
various compounds, 261b, 612
vitamins, 263, 605
shoot, 610
cow—*see Vigna sinensis*
diseases—
control, general, 1837f, 3763
fungus—
damping-off or seedling blight (*Corticium* and *Pythium* spp.), 1760, 2797
foot or root rot (*Fusarium* spp.), 1837g
leaf and pod spot and blight or foot rot (*Ascochyta* and *Mycosphaerella* spp.), 624, 626, 2781, 2804, 2865w
root rot (*Aphanomyces euteiches*), 1757
virus, 618, 620
flower bud initiation, 608, 610, 1328, 1740
flower characters, 3856m
flowering, rootstock affects, 607, 1328
fruit development *in vitro*, 2381
fruit physiology, 605
growing in various countries, 3751
growth—
cobalt affects, 3285
diffusates affect, 608, 1740
growth substances affect, 67, 609, 3269, 3270, 3315b
harvesting—*see also below under* quality—614, 3772
maturity—*see below under* quality
mitochondria, 37, 2373, 2374
nutrition—
cation absorption, 2744
fertilizer placement, 3856k
foliar, 1750
magnesium, 3704
manganese, 1754
molybdenum, 1256, 1752, 3762
nitrogen, 1349, 1750
phosphorus, 615
potassium, 1757, 3704
vitamins, 1305
pests—
aphids (*Acyrthosiphon pisum*), 629
birds, 427
control, general, 1837f, 3763
mice, 427
pollen beetle (*Tropinota hirta*), 3769
seed fly or maggot (*Delia cilicrura*), 2797
thrips (*Thrips angusticeps*), 633, 1763
weevils (*Bruchus*, *Sitona* spp., etc.), 1763, 1764, 2806
physiology—
amino acid metabolism, 1374a, 1375d
of developing fruit, 605
diffusates promote flowering, 608, 1740

Pea—physiology (*continued*)—
enzyme activity, 37, 1315, 1318, 1744, 1745, 2370, 2373, 2374
growth substances, metabolism, 60, 3315b
light responses, 610, 1805, 2370, 3270, 3315t
Pasteur effect, 1316
photosynthesis, 2371
respiration, 611, 1315, 1374d, 2415w, 3315t
of ripening seed, 612
temperature responses—*see also above*, climate—610, 3755
tissue culture, 117q, 611, 3285
translocation of herbicides, 2737n
pollen storage, 3752
processing, preservation, 597, 3855i
quality—
factors affecting, 614, 1747, 3757, 3759, 3772
measurement, chemical—*see above*, composition
measurement, physical, 3771
root, nodule formation, 2790, 2791
rootstocks, 607, 1328
seed—
composition—*see above*, composition
development, 612, 615
diffusates, 1740
germination, 2737 l, 3767
sowing drills, 3856k
sowing rate, 1267, 2789
storage, 626, 3768
testing and inspection, 3753, 3768
treatment—
with antibiotics, 624, 2865w
with fumigants, 3768
with fungicides, 1685, 1686, 1760, 2750, 2797-2800, 2804, 3767
by inoculation with bacteria, 3701, 3767
with insecticides, 1685, 2797, 2798
soil management, weed control, 494, 506, 2704, 2712, 2734, 2737d, 3600, 3665, 3666, 3693i
southern—*see Vigna sinensis*
sweet—*see* Sweet pea
varieties, 597, 1837x, 2739, 2864q, 3695, 3751, 3855u, 3856e

Peach—
× almond hybrid, 2433
breeding, 126, 128
climate—
drought resistance, 2572
phenological data, 2571
temperature responses of fruit, 1433
temperate responses of seedlings, 3338
winter chilling requirements, 352, 2570, 3488, 3598d
winter hardiness and injury, 128, 2567-2569, 3479
composition—
flower bud, 185
fruit, 257, 259, 3391

Peach—composition (*continued*)—
leaf, 1348, 1546, 2434, 2461, 2503v, 3378
root, 1523, 3379, 3473
seed, 3338
shoots and branches, 3379, 3473
diseases—
bacterial, bacterial spot (*Xanthomonas pruni*), 2587, 2588, 3498, 4285
bacterial, blast (*Pseudomonas syringae*), 1261, 3597i
cause uncertain, necrosis and leptonecrosis, 1518
fungus—
brown rot and blossom blight (*Sclerotinia* (*Monilia*) spp.), 383, 387, 1562, 2491, 2614, 2670m, 3518, 3553
fruit rot (*Rhizopus* spp.), 3518
leaf curl (*Taphrina deformans*), 384, 2605, 2606, 3519
mildew (*Sphaerotheca pannosa*), 1563
scab or freckle (*Fusicladium* (*Cladosporium*) *carpophilum*), 2670m
shot hole or gum spot (*Clasterosporium carpophilum*), 2605, 2660
wilt (*Verticillium* spp.), 2603
non-parasitic, of seedlings, 3338
virus—
chlorotic leafcurl, 3597e
leaf composition affected by, 1546
line pattern, 1538
mosaic, 1547
in the U.S.A., 1255
western X-disease, 1640s, 2578
yellow leaf roll, 2578, 2670t
flower bud differentiation and development, 183, 185, 3370
flower thinning, 2461
fruit—*see also above*, composition, *and below*, harvesting, packing, processing *and* storage—
abnormal, 445y
colour, factors affecting, 2460
drop, 2504s
quality, factors affecting, 257, 1451
respiration, 1467
ripening, tests for, 1264, 2486, 3318, 3391
ripening, volatile compounds given off during, 1467
set, estimation of, 3317
size, 3317
thinning, 199, 1264, 2417, 2478, 2479, 3371, 4285
growing in Australia, 1403
growing in the U.S.A., 1468g, 3321
growth—
measurement, sampling for, 3317
physiological dwarfing, 3338
size of nursery stock and, 175
harvesting, forecasting time of, 1433
harvesting, injuries to fruit during, 225
interstocks, incompatible, 2446
leaf, chlorophyll content, 1445
leaf, moisture-retaining capacity, 2572
mutations, 3335

Peach (*continued*)—
nutrition—
boron, 316, 3461, 3462
foliar, 3597 l
iron, 1348, 3466
manganese, 338
manuring, 209, 2460, 3378, 3379
minor elements, various, 3597 l
nitrogen, 1445
phosphorus, 1348, 1518, 3472
potassium, 1518, 2434, 2461
zinc, 1520
packing—
containers, 225, 2490, 2491
grading, 2504f
injuries—*see also above*, diseases—225, 3408e
methods, general, 3228
pests—
cat-facing and dimpling caused by, 2627, 2640
fruit flies (*Ceratitis, Drosophila* spp., etc.), 3553, 3554
mites, red spider (*Metatetranychus* and other spp.), 398, 400, 2626, 3519
nematodes, 396, 3539
oriental fruit moth (*Cydia molesta*), 410, 1015, 1609, 1610, 2670c
plum curculio (*Conotrachelus nenuphar*), 1610, 2640, 2671s
scale insects, 1599, 3519
stink bugs (various spp.), 2640
tree borer (*Sanninoidea exitiosa*), 2671r, 2671s
tree borer, lesser (*Synanthedon pictipes*), 2761s
twig borer (*Anarsia lineatella*), 2671o, 3558, 3559
physiology—
light responses, 3338
respiration, fruit, 1467
respiration, root, 1523
temperature responses—*see above*, climate
water relations, 3369
planting on old peach soils, 174, 1522, 1523, 3472, 3473
processing, fruit maturity for, 1451
propagation—
by cuttings, 2433, 2434, 3340
plant storage, 881
vegetative hybridization, 128
pruning, 1377, 2463, 2466-2468, 3361
roots, cation exchange capacity, 3057
roots, toxic substances in soil kill, 1523
rootstocks—
almond peach hybrid, 2433
nutrition affected by, 316
for ornamental varieties, 4022
production from seed, 2503k
-scion relationships, 2446
in various countries, 2503q, 4285
seed—
embryo culture, 146, 147
germination, 146, 147, 3336
Peach—seed (*continued*)—
vernalization, 3338
soil—
management, mulching, 209
management, weed control, 2690
waterlogging, 3490
spray injury, 432
spray programmes, 2671v, 3597 l, 3597o
storage, 237, 257, 260y, 387, 1467, 3407
variety(ies)—
in Australia, 1403
in Canada, 4285
for canning, 3408v
Dixired, 2503c
in European countries, 2424
in South Africa, 142
Southland, 2503b
Spotlight, 3334
in the U.S.A., 1393
Pear—
× apple hybrids, 2423
breeding, 126
climate—
drought resistance, 2572
spring frost injury and protection, 344, 1528
wind protection, 1380, 1381
winter chilling requirements, 352
winter injury and hardiness, 260w, 3477, 3479, 3487
composition, fruit, 244, 256, 259, 260f, 2485, 3391, 3392, 3408 l
composition, leaf, 211, 260f
diseases—
bacterial, blossom and twig blight (*Pseudomonas syringae*), 1261, 1553
bacterial, fire-blight (*Erwinia amylovora*), 1264, 1513, 1555, 2322
fungus—
black spot (*Alternaria kikuchiana*), 378
mildew (*Oidium* sp.), 379
Phyllactinia suffulta, 3597q
scab (*Venturia pirina*), 2418, 3503, 3504, 3597g
non-parasitic, hard-end or black-end, 1532
economics, marketing, 3396
economics, planting, 260q
flower bud differentiation, 183
fruit—*see also above*, composition, *and below*, harvesting, marketing, packing *and* storage—
colour, factors affecting, 3405
drop, spraying or dusting to retard, 202, 2480
lenticels, 196
parthenocarpy, natural and induced, 2472, 3330, 3353
ripening—*see also below*, storage—tests for, 242, 2486, 3391
set, growth substances improve, 3374
shape, factors affecting, 1435
size, factors affecting, 211
yields, 121
growing, a book on, 2308

Pear (*continued*)—
growing in various countries, 2503i, 2504a, 3321
growth, herbicides affect, 1652
harvesting, time of, 242, 2504v
interstocks, 2443, 3350
marketing, 3396
mutations, 133
nutrition—
boron, 1640b
foliar, 211, 3467, 3468
iron and lime-induced chlorosis, 3467, 3468
manganese, 3468
manuring, 1380, 3234j
nitrogen, urea sprays, 211
phosphorus, 3329
potassium, 1517
packing and grading, 2503m, 2504f, 2759, 3396
pests—
borers (*Agrilus* and *Xyleborus* spp.), 416, 2639
buffalo tree hopper (*Stictocephala* (*Ceresa*) *bubalus*), 1601
codling moth (*Cydia pomonella*), 1611, 1621
mites, leaf blister or bud (*Phytoptus piri*), 1621
mites, spider (*Bryobia*, *Metatetranychus* and *Tetranychus* spp.), 398, 400, 1018, 1585, 2622, 2625
oriental fruit moth (*Cydia molesta*), 1015
scale, San José (*Aspidiotus perniciosus*), 384
slugworms (*Caliroa* spp.), 426, 1615
sucker or psylla (*Psylla* spp.), 1621, 2650
physiology, water relations, 190, 1532, 2443, 2572
planting costs, 260q
pollination—
general, 3352-3354
pollen storage, 1422
pollen viability and germination, 1422, 2664
polyembryony, 3353
propagation—*see also below*, rootstocks—
bud-union anatomy, 1419
by double-shield budding, 260n, 2438
by marcotting, 2503u
on own roots, 3342
pruning and training, 260t, 2503p, 3359, 3487
rootstocks—*see also above*, interstocks *and* propagation—
cotoneaster, 260a
Pyrus spp., 159, 1420
quince, 260w, 1419, 1420, 3350
-scion relationships, 2443
seedling, uniformity in, 156
seedling, varietal studies, 157, 158
in various countries, 2503q, 2504d
seed—
halving to raise clonal seedlings, 148
number, fruit shape affected by, 1435
Pear—seed (*continued*)—
storage, 149
soil—
management—
irrigation, 222
mulching, 1380, 1381
weed control, 2690, 3600
waterlogging and flooding, 3490
spray injury, 353, 2670n
spray residues, 434
storage—
cold, 242-244, 260y, 1465, 3405
costs, 3396
ethylene treatment, 3405
gas, 2500
general, 2504b, 2504v
plastic box liners for, 237, 3404, 3405
quality, factors affecting, 211
ripening, 242, 244, 245, 1466, 3405, 3406
varietal behaviour, 1465
ventilated, 3406
weight loss in, 241
variety(ies)—
Doyenné du Comice, 166, 2418
Itala and Mora, 1402
Passe Crassane, 245
for processing, canning or juice, 140, 2425
for processing, perry, 141
in various countries, 1393, 1468k, 2503r, 2504y
Williams' Bon Chrétien (Bartlett), 202, 1465, 1466
Peat—
composition, 865f
as a manure, 2550
pots or soil blocks, 541, 543
in potting composts, 541, 2988
in rooting media, 1964
soil improvement by, 281
for soilless culture, 98, 875
Pecan—
diseases, 1575, 2615, 2670e
growing in various countries, 2558p
nut thinning, 1507
nutrition, minor element, 3471
varieties, 1393, 2556
Pectic substances of—
apple, 261b
boysenberry, 1472
citrus, 4128h
coffee, 2211
eggplant, 1836
pea, 261b
Pegomyia hyoscyami, 1799
Pelea anisata, 827
Pellicularia filamentosa, 2752
Pellicularia spp., unspecified, 2753
Penicillium—
digitatum, 1034-1036, 1038, 4106, 4108, 4127y
expansum, 3511
italicum, 1034-1036, 1038, 4106, 4108, 4127y
martensii, 1708
spp., unspecified, 4107

Pennsylvania agric. Exp. Stat., A.R., 3234q
Penstemon propagation, 974g
Peony—
  growing in the U.S.A., 974d, 3041p
  nutrition, 3466
  weed control, 3638
Peperomia, nursery stock packing, 2956
Pepper—
  black (*Piper*)—
    composition, 810
    growing under coconuts, 2909
    growing in various countries, 806, 807, 2948g, 2948p
    production and trade, 865v
    propagation by cuttings, 808, 809, 2910
    research in the Belgian Congo, 1265
    varieties, 807
  red and sweet—*see Capsicum*
Peppermint—*see under* Mint
Perga dorsalis, 1615
Perilla spp., light responses, 537
Periodicals, new or revived, 1282-1284, 2335-2339, 3233
Periscopus californicus, 4123
Peronospora—
  destructor, 654, 656
  parasitica, 2768
  tabacina, 1851, 1892
Perry—*see* Pear varieties
Persea species—*see also* Avocado—2057, 2064
Persimmon (*Diospyros kaki* and other *Diospyros* spp.)—
  climate, micro-, 4125
  climate, responses to, 1060
  composition, fruit, 1061, 4126, 4128j
  diseases, 1061
  nutrition, 3118
  pests, 1062, 1063, 1699, 3554
  physiology, 190, 2377
  processing, 1068n
  soil management, methods compared, 1060
  soil waterlogging, 3490
  varieties, 1068n, 2144, 3117
Peru, crops, vegetables, 672
Pest(s)—*see also* Insects *and individual pests and hosts*—
  books on, 4263, 4294a
  control—*see also* Acaricides, Insecticides, Plant protection *and* Rodenticides—
    biological—*see also* Mite *and* Sugar-cane—395, 445v, 567, 1118, 1234c, 1614, 1621, 1715, 1736, 1828, 2101, 2116, 2644, 3092, 3119e, 3156, 3217, 3224, 3597h, 3597n, 3932, 4091, 4093, 4123, 4128k, 4131, 4290
    on fruit crops, 3238, 3545
    by gas under pressure, 974w
    in glasshouses, 2965, 3222, 4006
    on ornamental plants, 974x
    reviews on, 3238, 3545
  damage in unsprayed orchards, 1621
  a dictionary of, 2559
  flowering dates altered by, 1073
  in Mauritius, 3121
Pest(s) (*continued*)—
  plant composition in relation to, 1022, 1125
  of stored products, 2153
Pestalotia mangiferae, 2215
Pestalotia versicolor, 3042o, 4030s
Petal abscission, 4030z
Petunia nutrition, 2976, 3466
Petunia, seed germination, 2955
Phalaenoides glycine, 1640t
Phalaris arundinacea, 458
Phaseolus—see also Beans (*Phaseolus*)—*radiatus*, 29
Phellodendron amurense, 2948d, 2948f
Phellomyces citri, 1034
Phenology—*see under* Climate
Phialophora cinerescens, 889, 2969, 3962
Philadelphus coronarius, 4012
Philaenus leucophthalmus, 408
Philippines, crops, 3892i, 3939c
Philodendron—
  cordatum, 2956
  hastatum, 3037
  spp., diseases, 3038
  spp., nutrition, 2959
Philomastix macleayi, 1615
Phlox—
  diseases, 3947
  hot-water treatment, 2410
  seed treatment, 3947
  varieties, 4030m
Phoenix—see also Date—*reclinata*, 860
Phoenix sylvestris, 2128
Phoma—
  citricarpa, 1034
  flaccida, 2607
  spp., unspecified, 2512
Phomopsis—
  citri—see Diaporthe citri
  mali, 3512
  spp., unspecified, 1566, 3191z
Phorbia—see also Delia or Erioischia—spp., attacking vegetables, 3713
Phormium tenax, growing and research in various countries, 1271
Phormium tenax, production and trade, 828
Phorodon humuli, 2933, 3912
Phosphorus—*see also individual crops under* nutrition—
  absorption—
    by different plant surfaces, 2079
    by leaves—*see below*, application, foliar
    by roots, 2266, 3382
  application, foliar, 214, 2266, 2549, 2832, 2919, 3070, 3382
  application, mist, 3833
  availability, bacteria enhance, 3702
  determination, 117b, 117h, 1374y, 3279, 4256e
  insecticides—*see under* Acaricides *and* Insecticides
  metabolism in fruit trees, 213
  nutrition—
    flower production responses, 1973
    of fruit trees, 212

Phosphorus—nutrition (*continued*)—
minor elements in relation to, 947, 3280
nitrogen in relation to, 1182, 2056, 2870, 4044, 4209
plant analysis as a guide to, 1203, 2259, 2262, 2263, 2265, 2266, 2305s, 4047, 4209
potassium in relation to, 1182, 2266, 4210
soil management practices affect, 4044
radioactive, 213, 615, 1334, 1374y, 1843, 2266, 2364, 2365, 2459, 2919, 3006, 3278, 3329, 3380, 3382, 3864, 4047
sources, 1204, 3167
translocation, 615, 1334
Photography, of fluorescence in plants, 3316g
Photometry, flame, 1309, 2415n, 3315x, 3316b
Photoperiodism—
gamma radiation affects, 768, 3868
growth substance relationships—*see* Growth-substances
horticultural applications of, 102, 874
light and darkness periods in, 3255
plant—
metabolism in relation to, 117f, 1198, 2368, 2372, 3315y
responses—*see also* Begonia, Chrysanthemum, *Kalanchoë*, Strawberry, Tomato *and Xanthium, under* physiology—
fruit trees, deciduous, 194, 260g
ornamentals—
annuals and biennials, 874, 900, 1985, 2952, 3975
bulbs and tubers, etc., 874, 909, 2950, 2993, 3008, 3980, 4282
conifers, 4028
herbaceous, 888, 2368, 3971
succulents, 2024, 3257
woody, 874, 945, 961, 3254, 3315m, 4031 l
small fruits, 194
tropical plants, 1198, 4167
various plants, 537, 767, 1070, 2918, 3868, 3901
vegetables, 610, 645, 674, 677, 687, 1698, 3788, 3800, 3803
reviews on, 874, 1327
seed responses to indirect effects of, 677
theory of, 117g, 2367
Photosynthesis, 39, 1199, 1320, 1321, 1374q, 1375b, 1416, 2180, 2288, 2315, 2369, 2371, 2415j, 2416e, 3264, 3315 l, 3803, 4015
Phragmidium mucronatum, 939
Phragmidium rubi-idaei, 386
Phylacteophaga eucalypti, 1615
Phyllactinia suffulta, 3597q
Phyllanthus emblica, 3190, 3191u
Phyllocoptes vitis, 1592
Phyllocoptruta oleivora, 1019, 2109, 4055, 4089
Phyllostachys spp., bamboos, 863
Phyllotaxis, 1374v
Physalis peruviana, 3456h
Physalospora obtusa, 368
Physalospora tucumanensis, 1214
Phytomonas caryophylli, 2969
Phytoncides from plants—*see also* Ethylene emission—2826
Phytophthora—
cactorum, 160, 369, 3513, 3530
cambivora, 1505, 1577
capsici, 3855c
cinnamomi, 1505, 1577, 2064, 2065, 3044
citrophthora—see under Citrus diseases, fungus, gummosis
cryptogea, 904
fragariae—see Strawberry diseases, fungus, red core
hibernalis, 4110
infestans on tomato—*see* Tomato diseases, fungus, blight
megasperma, 1993
palmivora, 1115, 1188, 1235g, 1235r, 2125, 2185, 2186, 2236, 4143, 4144, 4233
parasitica, 742, 786-790, 2872, 2900, 4110
phaseoli, 2866s
spp., unspecified, 2275, 4030o, 4105
syringae, 369
Phytoptus—see also Eriophyes—
piri, 1621
ribis, 1583
vitis, 2670v
Phytotoxicity—*see* Spray injury *and also under* Fungicides, Herbicides *and* Insecticides
Picea mariana, 824
Picea pungens, 4027
Pieris (*Ericaceae*) spp., forcing, 2032
Pieris (*Ericaceae*) spp., pests, 3023
Pieris rapae, 1714, 1715, 2772
Pigments—
anthocyanin, biosynthesis, 713, 1781
anthocyanin in plants, 278, 1510 l, 1510p, 2503t, 3041c, 3408 l, 3976
carotenoid—
biosynthesis, 3855h
determination, 2416a
in plants, 31, 253, 1967, 2380, 3097, 3789, 3976, 4188
chlorophyll, 32
flavonoid in plants, 1967, 3042g, 3976
pelargonidin, 4276
separation of, 2416a
various, in plants, 1999, 2053b, 2054e, 2977, 4031t, 4127u
Pimenta racemosa, 865h
Pine—*see Pinus*
Pineapple—
a bibliography on, 2306i
by-products, 3192c
climate, temperature responses, 1070
composition, fruit, 3191r
composition, leaf, 4054, 4187, 4188
diseases, non-parasitic, fruit breakdown, 2227
diseases, non-parasitic, salt water spray injury, 2225
flowering, growth substances delay, 4189, 4190

Pinapple (*continued*)—
flowering, treatments to advance, 1166-1169, 2226, 2227, 4129, 4189
fruit—
ripening, growth substance delays, 1167
weight, leaf number affects, 1166
yields, leaf measurements in relation to, 4187
growing in various countries, 2305i, 3192m
nutrition—
chloride injury, 2225
factory wastes for, 1202
general, 1164, 1165, 1167, 1168, 2224, 4054, 4129, 4187, 4188
packing, 1172, 1173
pests—
caterpillar (*Thecla basilides*), 1171
mealybug (*Pseudococcus brevipes*), 1170, 1257, 4130
scale (*Diaspis bromeliae*), 3156
physiology, water relations, 2223
planting material, fumigation, 4130
planting systems, 4186
production and trade, 1069
propagation, 3192j, 4185, 4254d
research in Ceylon, 1257
research in various countries, 1271, 3217, 4280, 4283
soil management, fumigation, 1164
transport, 1173
windbreaks, 2225
Pineus strobi, 2962
Pinus spp., pests, 950, 2962
Piper—see also Pepper, black—*betle*, 29, 809, 865b
Piperine determination, 810
Piptadenia macrocarpa, 1913
Piptadenia peregrina, 1913
Piscidia erythrina, 2935
Pistachio—
bud dormancy, 322
pomological studies, 1508
propagation, vegetative, 322
Pistia stratiotes, 3955
Pittosporum tobira, 2378
Plane trees, degeneration, causes of, 2053f
Plane trees, transplanting large, 3042p
Plant—
breeding—*see* Breeding *and under separate plants*
introduction services in the U.S.A., 1290, 3235
protection—
a bibliography on, 1511
economics, 327
Organization, European and Mediterranean, Rep., 4273
statistical methods, 118h
in various countries, 445u, 1512, 1622, 1640e, 2330, 3211, 3238
Plantago spp., for mucilage production, 833, 384
Plantation crops—
growing and research in various countries, 2151
Plantation crops (*continued*)—
labour studies, 1069
production and trade, 1069
Planting—*see also separate crops*—
contour—*see also* Soil conservation—4186
on land previously occupied by same crop—*see* Replanting
transplanting—
growth stimulation by chemicals, 1854
machines, 2408, 3886, 4127r
mature trees, 3042p
young trees and plants, 2409, 4127r, 4127x
Plasmodiophora brassicae, 1712, 3728
Plastic—
coatings for transplanting, 1100
covers for—
fumigating plants or soil, 2667
mulching, 1568, 2539, 2748
plants, 540, 2749, 3964
films for—
packaging fruits, nuts and vegetables, 690, 1776, 2131, 2302, 2303, 2553, 2759, 3191c
packaging plant material, 880
plant propagation, 153, 944, 959, 2046, 2051, 2172, 2503u, 2954, 3142, 4032, 4113, 4234
storing—
bulbs, 915
cut flowers, 2966
cuttings, 1221, 2952, 3951
fruits, 236, 237, 1463, 3106, 3404, 3405
shrubs, 3039
wrapping banana bunches, 2159
as a glass substitute, 108, 109, 2405, 2406, 2953, 2954, 3301, 3953
glaze, cut flowers treated with, 3985
materials, horticultural uses, 3304
Platyparea poeciloptera, 3713
Platypsectra interrupta, 1615
Plesiocorus rugicollis, 1600
Pleurotus ostreatus, 3773
Plum (including prune and gage)—
a book on, 4262
breeding, 126, 2504g, 3228
climate, winter chilling requirements, 352, 1507
climate, winter injury and hardiness, 349, 1529, 3477, 3478, 3487
diseases—
bacterial canker (*Pseudomonas* spp.), 3457
cause uncertain, branch and fruit canker, 330
fungus—
brown rot (*Sclerotinia* spp.), 1640l, 2417
Cytospora sp., 1564
heart rot (*Fusarium lateritium*), 330
silver leaf (*Stereum purpureum*), 2671e
wilt (*Verticillium* spp.), 2603
non-parasitic, gummosis, 1525
virus—
line pattern, 1538
mosaic, 355

Plum—diseases—virus (*continued*)—
new, 330
prune dwarf, 3597p
ring pox and/or spot, 143, 167, 1540, 1541
flower morphology, 188
fruit—*see also below*, harvesting, packing *and* storage—
drop, factors causing, 2483
drop, spraying or dusting to retard, 3373
ripeness, tests for, 223
size, growth substances affect, 2483, 3372, 3373
size, rootstocks affect, 168
yeasts, 1468j
growing in various countries, 119, 143, 3321
harvesting, 1452
nutrition, manuring and major elements, 2322, 2417, 2457, 2462
packing, 3228
pests—
aphids, 1621
curculio (*Conotrachelus nenuphar*), 3549
mites, 398, 400
slug sawfly (*Caliroa cerasi*), 426
pollination, 1426, 2417, 2664, 3354
processing, 223, 2425
propagation by cuttings, 152, 2436, 2457, 3340
pruning, 2504c, 3487
rootstock(s)—
Brompton, 152
hardy, 3478
Marianna, 1404
myrobalan, 152, 1404
as nurse roots, 2436
-scion relationships, 167, 168
in various countries, 270, 1404, 1421, 2503q
seed, embryo culture, 146, 2432
seed germination, 146, 2432
soil management, weed control, 2690
storage, 237, 246, 260y, 3406
variety(ies)—
frost resistance, 349
Požegača, 143
for processing, 2431
Sultan, 1421
in various countries, 270, 1280, 1393, 1404, 1468k, 2424, 2503 l, 2503r, 3408s
Zniwka, 2431
Plumeria spp., latex, 851
Plusia argentifera, 745
Plutella maculipennis, 567, 1714
Poa annua, 480, 1675b
Poa pratensis, 2017, 3014
Podagria fuscicornis, 3893
Podosphaera leucotricha, 1558, 2594
Podosphaera oxyacanthae, 380, 2602
Poinsettia—
diseases, 2050
flower, nectar secretion, 969
nutrition, 3281
physiology, 3278
Poinsettia (*continued*)—
propagation, vegetative, 2949
spray injury, 970
Poison ivy (*Rhus radicans*), 464, 523f
Poisonous plants, various, 3197
Pollen—
abnormal, 4158
collection from plants, 1423, 3309
composition, 2484
development, X-irradiation of parent plant affects, 2053u, 2053v
germination and tube growth—
boron and other nutrients affect, 1422, 1425, 3006, 4058
climatic factors affect, 1154, 1422, 3101, 3144
growth substance synthesis due to, 63, 1903g
growth substances and vitamins affect, 1424, 1425, 2387, 3752, 4058
media for, 17, 1422, 3354, 3752, 4026, 4058, 4120
sprays affect, 2664
techniques for studying, 1843, 3354, 3752, 4120
plants of Paraguay, 1073
production, factors affecting, 2061
storage and longevity, 171, 1422, 1724, 3144, 3354, 3752
treatment with X- and other rays, 3042f
viability and sterility in various plants, 4225
Pollination and fertilization—
anther opening, altitude affects, 3162
artificial, 1423, 2417, 4016
in the bud stage, 993
incompatibility, a review, 117u
by insects—*see also* Bees—apparatus for collecting, 2214
of plants—
fruit and plantation crops, evergreen—*see also* Citrus *and* Sugar-cane—1041, 1113, 1154, 3101, 3179, 4120
fruit trees, deciduous—*see also* Apple, Cherry, Pear *and* Plum—169, 173, 1423, 2473, 3458
nut trees, deciduous, 320
ornamentals, 972, 2991
small fruits—*see also* Vine—2509, 3412
vegetables, 534, 2764, 2814
pollen source affects, 1041
vibrating plants aids, 2865g
Pollinia pollini, 4127n
Polyembryony in plants, 2038, 2078, 3048, 3353, 4127q, 4156
Polygonum spp., control, 450, 2706, 2733 3621, 3649, 3657
Polyethylene—*see under* Plastics
Polyphenols—*see also* Tannins *and* Tea composition—determination, 3191m
Polyphenols in plants—*see also* Tea composition—4128j
Polyploidy, uses and effects, 275, 349, 2422, 4031u

Pomegranate—
a bibliography, 3408q
diseases, 1567, 3597w
growing in various countries, 3322
varieties, 3408a
Poncirus—
spp., seed characters, 980
trifoliata, as a citrus rootstock—*see under* Citrus
trifoliata, seed germination, 2078
Ponteria campechiana, 4255p
Popillia japonica—*see* Japanese beetle
Populus spp., propagation, 72
Poppy(ies)—
oil-seed, 3695
opium—
alkaloid content, 2918, 3896
breeding and varieties, 2917
by-products, compost, 1916
light and temperature responses, 2918
nutrition, 2919
oriental, composition, alkaloids, 3895
oriental, propagation, vegetative, 4030v
Porthetria dispar, 3598u
Portugal, crops, fruit, 2148o
Portuguese colonies, crops, coconuts, 2305k
Portulaca oleracea, 2733, 3643, 3657
Portulaca spp., growing under plastic lights, 2406
Pot(s)—
for miniature gardens, 2340k
plants—
nutrition, 112, 3954
pests, slugs, 4031d
watering, 112, 3954
soil (block), peat and turf, 541, 543, 3305, 3702
various types and substitutes, 975j, 1101, 2031, 3952, 4030h, 4166
Potamogeton foliosus, 2688
Potassium—
absorption—
cation exchange capacity of roots in relation to, 2077, 3057
growth phase of plant affects, 840
temperature affects, 3043, 4048
deficiency, nutrient distribution in plants affected by, 4182
deficiency symptoms, 2217, 4183
determination, 3279, 3315x, 3316b
leaching from plants by water, 2434, 3278
nutrition—*see also individual crops under* nutrition—
calcium in relation to, 947, 2077, 2261, 2744, 3137, 3704, 4042, 4048
foliar, 2549, 2832, 3070, 4234
frost resistance affected by, 1066
magnesium in relation to, 2077, 2087, 2217, 3056, 3704, 4042
nitrogen in relation to, 1066, 1182, 2261, 3053, 4210
phosphorus in relation to, 1182, 2266, 4210
plant analysis as a guide to, 1203, 2259, 2262-2264, 2267, 2305s, 3052, 4220
Potassium—nutrition (*continued*)—
plant metabolism affected by, 2258
plant structure affected by, 759
reviews on, 3201
shade affects, 1107
sodium in relation to, 2744, 3733
soil pH in relation to, 3704
water in relation to, 3056
permanganate, as a growth stimulator, 2389
radioactive, 1500, 3043, 3278, 4048
sources, feldspar and mica, 89
sources, frit, 3281
Pothos spp., nursery stock packing, 2956
Pratylenchus—
brachyurus, 2067
coffeae, 2671m
minyus, 1897
penetrans, 445p, 1580, 2670x, 2671q, 3538
pratensis, 3538
spp., unspecified, 799, 1578, 1579
Prays citri, 3208
Prays oleellus, 3115
Prickly pear, control, 1648
Primula—
diseases, 974c
herbicide injury, 3957
leaf hairs, toxicity of, 3970
nutrition, 1988
potting composts, 1988
Prinsepia sinensis, 4021
Privet—*see also Ligustrum*—plants, packing and storage, 881
Proceedings, Coconut Conf., Ceylon, 2195
Proceedings, nat. Shade Tree Conf., combined, 3234p
Procyon lotor lotor, 1619
Prodenia litura, 1903c
Promecotheca papuana, 2153
Propagation—*see also under plants and methods*—
books on, 1236, 1254, 2340f
box, small-scale, 959
frame, design of, 872
humidification systems—*see* Cuttings, mist *and* Humidifiers
vegetative, histories of, 117v, 3316d
vegetative, and regeneration, 3315s
Prospaltella smithi, 3092
Proteins, plant, determination and metabolism, 1375d, 2244, 2245, 3315k
Proteins, plant, insect multiplication affected by, 1125
Protium sp., resin from, 1277
Protoparce quinquemaculata 796, 2908a
Protoparce sexta, 796, 1893, 2908a
Protoplasm, changes during cell ageing, 2982
Prune—*see under* Plum
Pruning—*see also under* Training *and individual plants*—
fruit trees, 2463, 3358
mechanized, 987
methods, arching, 3357
methods, Renaud, 2467

Pruning (*continued*)—
root, 2552
wound, treatment of, 182
Prunings, disposal of, 117s
Prunus—
avium—*see also* Cherry—122, 2435, 4281
blireiana, 4022
cerasifera, 2435
cistena, 4022
glandulosa alboplena, 4008
mariana, 1404
persica—*see also* Peach—4281
species—
ornamental, forcing, 2032, 3039
ornamental, rootstocks for, 4022
various—
diseases, fungus, 1559
as minor fruits in the U.S.A., 125
nutrition, 4010
pests, 2671j
propagation, vegetative, 3039, 4008
as rootstocks for fruit trees—*see separate fruits under* rootstocks
tomentosa, 150
triloba, 3039, 4022
virginiana, 1651
Psalliota spp.—*see* Mushroom
Pseudaonidia duplex, 1015
Pseudaulacaspis pentagona, 1599, 4013
Pseudocneorhinus bifasciatus, 1968
Pseudococcus—
adonidum, 2066
brevipes, 1170
cuspidatae, 4029
maritimus, 1598
njalensis, 2190, 4142
spp., unspecified, 2117, 2118
Pseudodoniella pacifica, 2153
Pseudomonas—
angulata, 791
caryophylli, 889, 890, 4031r
caucasicum, 362
lachrymans, 581
marginalis, 2989
mors-prunorum, 2670g, 3497
phaseolicola—*see* Beans (*Phaseolus*), diseases, bacterial, halo blight
solanacearum, 775, 1837r, 1896, 2897, 3125, 3922
spp., unspecified, 949, 1883
syringae, 1261, 1553
tabacum—*see* Tobacco diseases, bacterial, wildfire
Pseudoperonospora cubensis, 584
Pseudopeziza ribis, 267, 3522-3524
Pseudosasa japonica, 863
Psila nigricornis, 1796
Psila rosae—*see* Carrot pests, insect, fly
Psilotum nudum, 65
Psylla pyricola (=*P. pyri*)—*see* Pear, pests, sucker
Pterandrus rosa, 2642
Pterocarya stenoptera, 3537
Pterygophorus sp. on *Leptospermum* sp., 1615
Puccinia—
anthirrhini, 898
carthami, 2946
graminis, 3014
kuehnii, 2306s
malvacearum, 3893
Puerto Rico—
crops, various, 865w
Federal Exp. Stat., Mayagüez, A.R., 1272
medicinal plants, 815
soil and water conservation research, 2152
Pulvinaria aurantii, 1015
Pumpkin—*see also* Cucurbits *and* Squash—
diseases, 1732
flower abnormalities, 1837s
fruit set and parthenocarpy, 592
fruit size, 593
growing in various countries, 2866i
nutrition, 2779
pests, 594
planting and spacing, 1737
seed treatments, 2750
weed control, 510
Puto antioquensis, 2209
Puto spp., unspecified, 4173
Pycnidiophora dispersa, 3947
Pyracantha spp., diseases, 948, 3041b
Pyrenochaeta terrestris, 659, 3774
Pyrethrum—
diseases, 2939, 3213
flower(s)—
anatomy, 3939f
bud initiation, 3213
picking, 847, 2937
pyrethrins, 865q, 3939d-3939g, 3939n, 3939x
growing, mechanization of, 847
growing in various countries, 846
herbicide responses, 2938
nutrition, 2937, 3234t
planting, 2937
production prospects, 2936
research in East Africa, 2937, 3219, 4283
seed production, 2937
soil management, mulching, 2937
soil management, weed control, 2938
Pyrilla spp. on sugar cane, 1207, 4231
Pyrus—
calleryana, 159
doumeri, 1401
spp., as apple rootstocks, 162
Pythium—*see also* Damping-off—
aphanidermatum, 792, 2908d, 3884
complectens, 1188
debaryanum, 2900
spp., unspecified, 2050, 2753, 2986

Quarantine, plant, 2306v
Quarterly Bulletin of the International Association of the Agricultural Librarians and Documentalists, a new periodical, 3233
Québec, Soc. Pomol. Cult. fruit., A.R., 4290
Queensland—*see also under* Australia—Dep. Agric. Stock, A.R., 2331

Queensland Bureau Sugar Exp. Stats, A.R., 2248
Quercus borealis, 4015
Quercus suber, 3938
Quince—
diseases, 948, 3597o
nutrition, 3469
pests, 426
propagation by cuttings, 1409, 1410, 3469
propagation on own roots, 3342
as a rootstock for apple, 162
as a rootstock for pear—*see* Pear rootstocks
spray residues, 3595
Quinic acids in fruits, 259

Rabbit—*see under* Rodents
Radiation, thermal neutron, 130
Radioactive—
bodies in fig fruits, 1915, 3408y
growth substances, 3834
herbicides—*see* Herbicides
insecticides—*see* Insecticides
isotopes—
for measuring pollen-tube growth, 1843
radioautographic techniques, 3275
uses in agricultural research, 14, 433, 495, 1468d, 1700, 2415r, 3220, 3315f, 3315z, 3329
uses in mycological research, 2908p
nutrients—*see also* Carbon *and* Phosphorus —92, 95, 1308, 1312, 1500, 1812, 2264, 2359, 2365, 3043, 3062, 3138, 4048
sugars, 2558x
viricides, 2893
Radiographs—*see under* X-ray
Radish—
climate, temperature responses, 3251
composition, 3796
diseases, 1783, 2752, 2827
flower abnormalities, 1838a
growing in the tropics, 2864w
growth substance responses, 58, 67, 3797
nutrition, 674, 3290
packing, 530, 3797
physiology, 674, 3796
polyploidy induced, 673, 2422
root storage, 1783, 1784
seed germination, 537, 3298
seed production, 534
soil conditioners, 80
spray injury, 2754
varieties, 530, 3795
Radopholus similis, 2067, 2112-2115, 2148s, 3045, 3119f, 3217, 4094, 4127a
Rain—*see under* Climate
Rambutan (*Nephelium lappaceum*), 1271, 4129
Ramie—
fibre extraction, 1277, 1929
growing in Asia, 3939c
growing in the U.S.A., 3939y
harvesting, 1929
nutrition, 830, 1928
seed germination, 537
seed oil composition, 1946
varieties, 1271, 1928
Ramularia bellunensis, 2939, 3213
Ramularia primulae, 974c
Ranunculus spp., alpine, in New Zealand, 2053g
Ranunculus spp., diseases, 2330
Raphia ruffia, 831
Raspberry—*see also Rubus*—
breeding, 272
climate, frost damage and resistance, 268, 2417
climate, winter chilling requirements, 268
composition, fruit, 263
diseases—
fungus, 386
general, in various countries, 2670d, 3598q
virus, 360, 1514, 1548, 1549, 2579, 2580, 3495
growing in Europe, 1558n
growing in Great Britain, 262, 1474
growth, dormancy, 268
nutrition, manuring and major elements, 1256
nutrition, minor elements, 1256
packing fruit, 269
pests—
centipede, garden (*Scutigerella immaculata*), 415
general, in various countries, 2670d, 2670y, 3598q
nematode, 2671q
root borer (*Bembecia marginata*), 3560
propagation by root cuttings, 72, 270, 1475
pruning and trellising, 1377
research in Great Britain, 1474, 4288
× *Rubus arcticus* hybrid, 3409
soil management—
cover crops, 1469
mulching, 2551
weed control, 471
variety(ies)—
for processing, 326f
in the U.S.A., 1264, 1393, 2503r, 2558e, 2558v
in various European countries, 270, 1280, 2517
Rat—*see under* Rodents
Rauwolfia (*Rauvolfia*) spp., medicinal plants, 865g, 865 l, 865m, 1907-1910, 1954x, 2920-2923, 2948e, 3898, 4279
Red currant—*see also Ribes*—
breeding, 267
composition, fruit, 2507, 3392, 3413
diseases, 267, 3581
fruit development, 3413
growing in Belgium, 2558n
nutrition, 3234j
pests, 427, 3573
planting, spacing, 2507
pruning, 2503p
rootstocks, 2507
varieties, 2503r
Red spider—*see under* Mites
Rejuvenation of woody ornamentals, 4020
Replanting, evergreen fruit and plantation trees, 1104, 2076

Replanting, deciduous fruit trees—*see also* Peach *under* planting—120, 174, 1521
Report(s)—*see also* Annual Reports, Proceedings *and* Yearbooks—
biennial, Illinois agric. Exp. Stat., 1264
biennial, Vineland hort. Exp. Stat., Ont., 3228
Bundesanst. PflSchutz, Vienna, 3211
centr. exp. Fm, Ottawa (various Divisions), 2320, 3212
Cocoa Conf., London, 2162
European and Mediterranean Plant Prot. Organization (E.P.P.O.), 4273
Fats and oils, F.A.O. Commodity, 1263
Harrow exp. Fm, Ont., 4285
nat. agric. advis. Serv., Great Britain, 1273
Office Rech. sci. tech. Outre-Mer, Paris, 4287
Station Rech. vitic. Arbor. fruit. Sud-Ouest, 1378
Resins—
chemistry, 865o
ion exchange, in plant nutrition, 3597m
sources and production, 1277
Respiration—*see also individual crops under* physiology *and* storage—
flower, cut, 3960
fruit, 231, 708, 1008, 1467, 1728, 2069, 2122, 2499, 2501, 3246, 3406, 3819, 4104
plant, 40, 43, 611, 1008, 1315, 1329-1331, 1374d, 1867, 2377, 2415w, 3259-3261, 3315t, 3693g
virus diseases affect, 3880
Reviews, book—
Adriance, G. W., and Brison, F. R., Propagation of horticultural plants, 1236
Amelinckx, F., and Amelinckx, S., Lexicon Dendrologicum, 3193
Andrewartha, H. G., and Birch, L. C., The distribution and abundance of animals, 1285b
Balcar, J., and Škula, K., Cigarettadohánkok termesztése, 1237
Barnes, H. F., Gall midges of economic importance, Vol. VII, Gall midges of cereal crops, 2340b
Bean, W. J., and Pearce, S. A., Shrubs for amateurs, 2307
Blunck, Handbuch der Pflanzenkrankheiten, Bd. V, Tierische Schädlinge an Nutzpflanzen, 2. Teil, Lief. 3: Heteroptera, Homoptera, 1. Teil, 3194
Brooke, J., Dessert pears, 2308
Brouwer, W., and Stählin, A., Handbuch der Samenkunde für Landwirtschaft, Gartenbau und Forstwirtschaft, 1238
Buttress, F. A., World list of abbreviations, 2309
Cheema, G. S., Bhat, S. S., and Naik, K. C., Commercial fruits of India, 2310
Coste, R., Les caféiers et les cafés dans le monde, 4257
Dames, T. W. G., The soils of each central Java, 3196
Reviews, book (*continued*)—
Darlington, C. D., and Wylie, A. P., Chromosome atlas of flowering plants, 4258
Douglas, J. S., Hydroponics: the Bengal system, 2311
Forsyth, A. A., British poisonous plants, 3197
Frankton, C., and Wright, W. H., Weeds of Canada, 2672
Garrett, S. D., Biology of root-infecting fungi, 2313
Good, R., Features of evolution in the flowering plants, 4259
Goodey, T., Goodey, J. B., and Franklin, M. J., The nematode parasites of plants catalogued under their hosts, 4260
Goodspeed, T. H., The genus *Nicotiana*: origins, relationships and evolution of its species in the light of their distribution, morphology and cytogenetics, 1239
Gray, H. E., Farm service buildings, 2314
Grümmer, G., Die gegenseitige Beeinflussung höherer Pflanzen: Allelopathie, 3199
Hellyer, A. G. L., Flowers in colour, an amateur gardening encyclopaedia, 2340e
Hellyer, A. G. L., Herbaceous borders, 2340g
Hellyer, A. G. L., Plant propagation, 2340f
Hill, R., and Whittingham, C. P., Photosynthesis, 2315
Holly, M. A., Agriculture in Haiti, 1240
James, E. H., Unusual vegetables, 4261
Lawrence, W. J. C., Soil sterilization, 2318
Łucka, M., Sliwy, 4262
Metcalf, R. L., Organic insecticides, 3203
Nightingale, G. T., Horticultural science, 1241
Ordish, G., Garden pests, 4263
Parsons, H., Grapes under glass, 1242
Pichel, R. J., and Maertens, C., Les pourridiés de l'hévéa dans la Cuvette congolaise, 4264
Plant Protection Ltd. (Scovell, D. L. W., and Scovell, E. O.), Common farm weeds illustrated, 2673
Podubský, V., and Štědronsky, E., Vodní, bažinné a pobřežní rostliny, 3204
Pollard, F. H., and McOmie, J. F. W., Chromatographic methods of inorganic analysis, 2316
Reed, C. A., and Davidson, J., The improved nut trees of North America and how to grow them, 2317
Renault, R., Chimie agricole, Tome I. Chimie végétale, 1244
Reynolds, P. A., Maintenance of horticultural equipment, 1245
The Royal Horticultural Society (Synge, P. M., and others), Dictionary of Gardening: Supplement, 4265
Saakov, S. G., Palms and their cultivation in the U.S.S.R. [Russian], 4266

Reviews, book (*continued*)—
Sanecki, K. N., Wild and garden herbs, 4267
Shoemaker, J. S., and Teskey, B. J. E., Practical horticulture, 1246
Smith, K. M., and Lauffer, M. A., Advances in virus research, Vol. III, 2319
Soenen, A., Wörterbuch bedeutender Krankheiten und Schädlinge in Land- und Gartenbau, 2559
Sokolov, S. Ja., Trees and shrubs of the U.S.S.R., III, 4268
Stanford Research Institute and others, Proceedings of the Third National Air Pollution Symposium, 1248
Steinmann, A., and Wiersum, L. K., Ziekten en plagen van *Hevea brasiliensis* in Indonesië, 4269
Stellwaag, F., and Knickmann, E., Die Ernährungsstörungen der Rebe, ihre Diagnose und Beseitigung, 1249
Swaine, D. J., The trace element content of soils, 1247
Symons-Jeune, B. H. B., Natural rock gardening, 1250
Thomas, D. G., The gladiolus for garden and exhibition, 3206
Walkden, G. B., Cloche cultivation, 2340j
Walker, C. F., Miniature gardens, 2340k
Wells, J. S., Plant propagation practices, 4270
White, P. R., The cultivation of animal and plant cells, 1285u
Whitehead, S. B., Fruit from trained trees, 3207
Wishart, J., and Sanders, H. G., Principles and practice of field experimentation, 1251
Witte, K., and others, Klimatologische, pflanzenphysiologische und technische Probleme der Beregnung, 1252
Work, P., and Carew, J., Vegetable production and marketing, 1253
Wright, R. C. M., Plant propagation, 1254
Rhabdopterus picipes, 2513
Rhagoletis—
completa, 3556
pomonella, 1606, 3563
spp. on cherry—*see* Cherry pests, fruit fly
Rhizobium spp. for beans or peas, 3767
Rhizoctonia—*see also* Damping-off—
bataticola, 2201, 3191j
crocorum, 3791
solani—*see Corticium solani*
spp., unspecified, 1789, 1826, 2050, 2512
Rhizoecus spp., unspecified, 4173
Rhizoglyphus solani, 732z
Rhizopus nigricans, 1233, 3553
Rhizopus stolonifer, 3518
Rhodesia and Nyasaland, fed. Minist. Agric., A.R., 1276
Rhododendron—*see also* Azalea—
diseases, 3041q, 3042i
Rhododendron (*continued*)—
forcing, 2032
hybrids, 3040
nutrition, 4010
pests, 3041q
photoperiodic response, 874
pollen germination, 4026
pollen storage, 1422
pollination, 972
propagation—
by cuttings, 3950, 4024
by marcotting, 944
by tip-grafting, 2051
soil management, weed control, 475
soil pH responses, 4023
species, *R. macrophyllum*, 971
species, taxonomy, 4023
Year Book, Rhododendron-Gesellschaft, 3040, 4023
Year Book, roy. hort. Soc., 2036
Rhodymenia palmata, 862
Rhopalosiphum prunifoliae, 2962
Rhopobota naevana, 2513
Rhubarb—
composition, 660, 3786
marketing, 1778
nutrition, 3786
physiology, water relations, 660
research in Great Britain, 2821
stomatal guard cells, 44
Rhus spp., tannin from, 1954k
Rhynchites auratus, 3552
Rhynchophorus ferrugineus, 2202
Rhythms, endogenous, in plants, 3315h
Ribes—*see also* Black currant, Gooseberry *and* Red currant—spp., hybridization, 283
Riboflavin—*see under* Vitamin B
Ricinodendron viticoides, 2945
Ricinus communis—*see* Castor
Ringing—
fruit and nut trees—*see also* Apple—2129, 2435, 3071, 3362, 4056, 4121
herbaceous plants, 2875
vines, 300, 1499, 3451
Rivista di Agrumicoltura, a new periodical, 1283
Road verges, plants or trees for, 2030, 3015
Roads, landscape treatment, 3941
Robinia pseud-acacia, 973, 2052
Rock gardens, 1250
Rodent(s)—
Aplodontia rufa, 3598j
control—
electric current for, 427
general, 428, 2654, 3572
repellents for, 1618, 3571
in Europe, 1640g
gophers, 3119n
mice, 427, 445t, 1620, 2655, 2670r, 3570, 3598r
rabbits, 1618, 3571
rats, 2246, 3568, 3569, 3598r
squirrels, 1640h
voles, 445t, 2671a

Rodenticides—
application by aircraft, 2246
coumarin derivatives, 3569
endrin, 3570
fluorine compounds, 1640m
various, 1620
Root(s)—
cap structure, rooting medium affects, 4014
cation exchange capacity, 2077, 3057, 4048
cuttings—*see under* Cuttings
growth—
factors affecting—*see also* Apple growth—989, 2080, 3408r, 4015
a review on, 3316h
spiral, seed desiccation causes, 2286
-inducing substances—*see under* Cuttings
-infecting fungi, 2313
nodule formation, 2039, 2790, 2791, 3937
regeneration of plants from—*see under* Cuttings *and* Propagation
secretions, 3316c
systems—
radioactive studies on, 3220
temperature affects, 1964
of trees and shrubs, 990
tissue culture—*see under* Tissue culture
Rootstock(s)—*see also* Interstocks—
characters and growth, scions affect, 1103, 1177, 2441
effects on scions—
bearing regularity, 3072
cold resistance, 260w, 3349, 3485, 3999
disease and pest resistance, 582, 3348
dwarfing, 260a
flowering, 607, 929, 1328, 1412, 3999, 4000
fruit—
composition, 4038
ripening, 3348
size, 168
storage behaviour, 229, 2442
yield, 163, 166, 2439, 2536, 3345, 3348, 3350
growth habit, 163, 4038
nutrient uptake and status—*see also* Citrus composition, leaf—316, 4050
physiological, 2443, 3349
herbaceous, annual scions on, 773
as nurse roots, 2436
for plants—
herbaceous—*see also* Tomato rootstocks—582, 607, 773, 1328
succulent, 929
trees and shrubs—
coniferous, 4031b
ornamentals—*see also* Rose—4017, 4018, 4022
temperate fruits and nuts—*see also* Almond, Apple, Apricot, Cherry, Peach, Pear, Plum, Vine *and* Walnut—156, 2507
tropical and subtropical fruits—*see* Avocado, Citrus *and* Mango
tropical and subtropical plantation crops, 1103
Rootstock(s) (*continued*)—
replant problems in relation to, 2076
a review on, 3238
-scion interrelationships—
bud union anatomy, 4039
comparative trials and general studies on, 139, 155, 159-164, 167, 285-287, 315, 1103, 1404, 1414, 1420, 1421, 2439, 2441, 2507, 2541, 3344, 4038
incompatibility, 1009, 1411, 1419, 1494, 2446, 2564, 3344, 3347
in inter-generic combinations—*see also* Citrus *and* Pear—162, 4018, 4031b
stem effect in, 2440
virus diseases of citrus—*see under* Citrus diseases, virus
woody, herbaceous scions on, 601
Rosa—
bracteata, 3015
canina, 932, 933, 936, 4000, 4001
chinensis semperflorens, 3041f
damascena, 1925, 1954o
eglanteria, 1649, 4001
gallica, 931
hugonis, 4001
indica-major, 932
laxa, 932, 936
manetti, 932
moschata, 931
multiflora, 931-933, 935, 936, 3015, 3017, 3999-4001
odorata, 931
polyantha inermis, 932
rubiginosa, 932, 933, 936
rugosa, 935, 3017, 4000
spp., wild, destruction of, 1649
Rosaceae, seed germination, physiology of, 943
Roscoea spp., ornamental, 1956
Rose—
Annual, nat. Rose Soc. G.B., 3015
breeding and selection, 931
climate, frost responses or protection, 3999
climate, temperature responses, 3019
diseases—
cause uncertain, bullheading, 938
fungus, 939, 940, 2026-2028, 2739, 2950, 3016, 3018, 3021, 3516, 4132
multipurpose dusts for, 2026
varietal resistance, 931, 3015
virus, 4004
flowers(ing)—
cut, packing and storage, 2966, 3960
cut, senescence, chemical changes associated with, 4007
factors affecting, 4002
malformation, 938
wax, 1954o
growing as shock absorbers on highways, 3015
mercurial paints injure, 3020
nutrition, manuring and major elements, 2952, 4002
nutrition, minor elements, 876, 2952, 3466, 4003

Rose (*continued*)—
oil, 1925, 1954n
packing flowers—*see above*, flowers, cut
packing plants, 880, 881
pests—
mites, 2950, 4005
multipurpose aerosol for, 2026
nematodes, 2774, 3016
thrips, 4006
physiology, 3278
planting, waxing prior to, 3016
propagation by cuttings, 933, 935, 937, 4002
pruning, 2739, 2949
research in the U.S.A., 1267, 3016
rootstocks, 932-936, 2950, 3015, 3017, 3018, 3999-4001, 4281
seed—
embryo culture, 3019
germination, 3019
stratification, 934
soil management, weed control, 1655, 3016
soil sickness, 3538
soilless culture, 2949
storage—*see also above*, flowers—of plants, 881
varieties, 930, 974b, 974p, 2025, 2950, 3015, 3209, 3945, 4000
wild—*see under Rosa*
Rosellinia necatrix, 2601, 3464
Rosemaund exp. Husbandry Fm, N.A.A.S., 4294o
Rosewarne exp. Hort. Stat., N.A.A.S., 1287
Rotations, crop responses to, 1862
Rotylenchus sp. in turf, 2018
Rubber—
Fund Bd N. Borneo, A.R., 4255j
particle structure, 851, 4199
plants—*see also* Hevea, Kok-saghyz *and* Krym-saghyz—apocynaceous, 851
plants, *Euonymus* spp., 2941
Rubidium in plants, 92-95
Rubidium, radioactive, 92, 3278
Rubus—see also under Small fruits *and individual fruits*—
arcticus, 2519, 3409
macrocarpus, 326g
spp.—
apomixis in, 4281
a collection of, 4281
hybridization, 283, 3409
in the U.S.A., 2518
Rumbeke-Beitem exp. Gdn, A.R., 1380, 1381
Rumex acetosella, 472, 2692
Rushes, control, 2737i
Russia—*see* U.S.S.R.
Russian comfrey (*Symphytum* sp.), 3695
Rutabaga—*see* Swede
Rutin in plants, 780

Sabulodes caberata, 978, 2066
Saccharum—see also Sugar-cane—*spontaneum*, 3645
Safflower—
diseases, 2946
Safflower (*continued*)—
growing in the U.S.A., 858, 3927
growing in various countries, 1259
oil, 858, 1954s
varieties, 3927
Saffron—*see Crocus*
Sago palm growing in the South Pacific, 3191t
Sahlbergella singularis, 2188
St. Helena, agriculture, 1295
St. John's wort (*Hypericum perforatum*) control, 3226, 3682, 3683
St. Vincent agric. Dep., A.R., 2306 l
Saintpaulia—
growing as a house plant, 4030c
light responses, 3971
pests, 2963
Saissetia oleae, 3116, 4123
Salad crops—*see also separate crops and* Vegetables—cultivation under glass, 1787
Salad crops, cultivation in the U.K., 1788
Salix spp., control, 3621
Salts—*see also* Chloride, Sodium *and* Soil salinity—absorption and accumulation, physiological aspects, 1351
Salts, tolerance and injury of plants, 82, 83, 339, 830, 3316k, 4118
Salvadora oleoides, 3928
Salvia—
sclarea, 2925, 2926
spp., potting composts, 1969
splendens, 874, 2422
Salvinia spp., control, 2689, 3693c
Sambucus canadensis, 125
Sambucus spp., variegated, 947
Sampling—*see* Statistical
Sanninoidea exitiosa, 2671r, 2671s
San José scale control, 384, 1640j
San Remo floric. Exp. Stat., A.R., 2951
San Tomé and Principe, crops, cacao, 1234g
Sand storm damage to plants, 3877
Sansevieria growing as an ornamental, 4030b
Sansevieria nutrition, 2959
Santalum acuminatum, 2927
Santalum spp., seed fats, 2948i
Santonin from *Artemisia* spp., 816, 817
Sap composition in relation to nutrition, 4209
Sapodilla fruit composition, 4255p
Sapogenins, steroidal, surveys of plants containing, 1912, 3940b
Saponins in plants, 814
Saraca indica, 2054c
Sarawak Dep. Agric., A.R., 1285p
Sarawak Dep. Agric., work of, 2151
Sargassum spp., alginic acid from, 1944
Sawdust—*see* Mulching materials *and under* Cuttings, rooting media
Sciara modesta, 3847
Scilla spp., nuclei staining, temperature affects, 2010
Scirpophaga nivella, 4228
Scirtothrips dorsalis, 1063
Sclerotinia—
fructicola, 1562, 2614, 3553

Sclerotinia (*continued*)—
fructigena, 387, 1640c, 1640 l, 3517
homeocarpa, 2752, 3994
laxa, 1640c, 1640 l, 2656, 2657, 2659
libertiana, 1034
sclerotiorum, 515, 572, 1883
spp., unspecified, 382, 2670m
Sclerotium—*see also* Damping-off—*cepivorum*, 1837e, 2817
Sclerotium rolfsii, 913, 1255
Scopelodes dinawa, 1955a
Scorzonera—
diseases, 2864m
soil sterilization for, 2828
tumour tissue, growth substances affect, 2385
varieties, 525
Scotland—*see also under* Great Britain—Dep. Agric., agric. Statistics, A.R., 3234d
Scottish hort. Res. Inst., A.R., 1285q
Scutellista cyanea, 4123
Scutigerella immaculata, 415
Scyphophorus acupunctatus, 832
Seaweed—
composition, 1944, 1954c, 1954 l, 1954p
essential oils, 1954b
harvesting, mechanical, 865k
research in Canada, 1945
Sedum spp., flower anatomy, 2054h
Seed(s)—*see also* Embryo *and individual plants*—
analysis as a guide to plant nutrient status, 3158
-beds—
soil salinity in, 81
sterilization, furnace for, 746
weed control in—*see* Weed control in specific areas
-borne diseases—*see also* Virus transmission —626, 1971
-borne nematodes, 4030d
boxes, aluminium, 79
cleaning, 1372
coats, role in germination, 3337
composition, age affects, 3876
composition, carbohydrates, 4255n
counting, photoelectric, 2393
development in beans, 604
development in mangoes, 3145
dormancy, after-ripening and dormancy breaking—*see also below*, germination—144, 536, 537, 2044, 2045, 3019, 3420
drills, 3856k
drying, 1954h, 2286, 2394, 4164
endosperm, anatomy, 4254e
endosperm, development in various plants, 2054a, 4158
formation, growth substance treatment assists, 3011
germination—
chemical processes during, 857, 865c, 943, 3736
depth of sowing affects, 2741
embryo position affects, 2557
enzyme activity during, 2948b
Seed(s)—germination (*continued*)—
fluctuations in, 2397
fungi affect, 925, 1971
inhibitors, 1904, 4037
insecticides affect, 1697, 2805
light responses, 537, 677, 1324, 3799, 3899
maturity affects, 4021, 4116
media, 811, 1792, 2216, 2988
under mist, 2955
nitrogen affects, 811, 1792, 3298
in oil palms, 2216, 3191a
pre-harvest climate affects, 3019
reviews on, 1374m, 3296
in the Rosaceae, 943
seed-packets affect, 2395
soil fumigant residues affect, 2751
speed, factors affecting, 899
temperature responses, 1324, 2216, 3041x, 3337
tests—*see below*, testing
water absorption during, 2396
halving to produce clonal seedlings, 148
identification, 1238, 2392
mutation, storage encourages, 78
Pathology Service, Danish, A.R., 3234a
production—*see also* Tobacco—
beet and spinach, 534, 687
crucifers, 534, 557, 558, 3856d
cucurbits, 534, 587
flower crops, 1259, 3011
onions, 534, 3778
solanaceous crops, 1858
various crops, 2937, 3179
in various temperate countries, 558
in various tropical and sub-tropical countries, 557, 1259
quality—*see also below*, testing—77
size, factors affecting, 3818
size, plant yield related to, 2836
storage and longevity, 78, 149, 538, 626, 1684, 2078, 2395, 2866m, 2987, 3007, 3041 l, 3876, 3899, 3923, 4236, 4281
testing—
international aspects, 1682
methods, 925, 1683, 1971, 2044, 3297, 3753, 3768, 3775, 4037
in various countries, 77, 2866d, 3234s
threshing, machines for, 2943
treatment—*see also below*, vernalization—
with activated carbon for protection against herbicides, 2734
with antibiotics, 624, 2659, 2865w, 3897
with bacteria, 3701, 3767
with chlorine, 3420
with colchicine, 641, 673, 3421
cold and warm, 2837
with fumigants, 2815, 3768
with fungicide and insecticide mixtures, 1685, 2796-2798, 3948
with fungicides and bactericides, 525, 625, 791, 1686, 1739, 1758-1760, 2286, 2432, 2658, 2750, 2798-2800, 2804, 2817, 3767, 3947
with growth substances, 555

Seed(s)—treatment (*continued*)—
with hot or cold air, 2044, 2880, 3922
with hot or cold water, 1904, 2045, 2216, 3336
with insecticides, 657, 667-669, 1687, 1696, 1697, 1739, 2771, 2805, 2818, 2819, 3712
by irradiation with gamma rays, X-rays, etc., 3754, 4165
with methylene blue, 2778
with minor elements, 3781
pelleting, 667, 668, 678, 1791, 2817-2819
with potassium compounds, 2389
seed coat removal or cracking, 1963, 2044, 2216, 4037
with silicones, 1739
with sodium hydroxide, 1963
with sodium hypochlorite, 728, 3855x
by stratification, 934, 1261, 2432, 3899, 3918, 4021, 4037
with sulphuric acid, 1963
with thiourea, 537, 2390
vernalization—
diffusates a substitute for, 608, 1740
of plants, composites, 679, 3800
of plants, various, 2991, 3338, 3922
Selenium as a plant nutrient, 1205
Selenothrips rubrocinctus, 1125
Semiarundinaria fastuosa, 863
Senecio jacobaea, 523j
Senescence in plants, 703, 704
Septoria apii, 572, 1721
Septoria ribis, 386
Sequoia gigantea, 1964
Sericocera krugii, 4131
Service berry, 124
Sesamum indicum (sesame), 859, 2940
Sesbania aculeata, 2306k
Sesbania speciosa, 2306k
Setaria, spp., control, 491, 3676
Sewage—
for composting or manuring, 3291
sickness, 3709
water for irrigation, 1350
Sexava spp., unspecified, 2153
Seychelles Dep. Agric., A.R., 2340i
Shaddock—*see under* Citrus
Shade—*see also* Light—
fruiting season affected by, 1102
leaf structure affected by, 769
nutrition of crops in relation to, 1106, 1107, 2288, 2289
plant requirements and responses—*see also* Cacao, Tea *and* Tobacco *under* physiology *or* shade—2223, 2306k
rainfall distribution under, 1145
temperature of houses affected by, 942
tree Conference, nat. Proc., 3234p
trees and plants—
Grevillea robusta, 1217
Inga spp., 1145
Sesbania speciosa, 2306k
water losses affected by, 1978
Shallot diseases, 659, 2865 l
Shallot growing in various countries, 642
Shea-butter tree (*Butyrospermum parkii*), 1949
Shelter belts—*see* Windbreaks
Shepherdia argentea, 125, 974e
Shrubs—*see* Trees and
Sicyos angulatus, 3688
Sierra Leone Dep. Agric., A.R., 1285r
Silene armeria, 3256
Silicates in plant nutrition, 3282
Silk worms, fluorine injury to, 1640r
Sinapis arvensis, 849
Singapore bot. Gdns Dep., A.R., 1285s
Sinocalamus oldhami, 864, 865w
Sipha flava, 4131
Siphocoryne indo-brassicae, 3583
Sisal—
harvesting, 832, 2930
hecogenin (cortisone) from, 2948u
nutrition, 832, 2930
pests, 832
planting and spacing, 832
production and trade, 828
research in East Africa, 832, 2930, 3219, 4283
soil management, mulching, 832, 2930
varieties, variegated, 3909
Sisymbrium officinale, 1324
Sitona lineatus, 1763
Slugs and their control, 1190, 2757, 3596, 4031d
Small fruits—*see also separate crops*—
breeding in the U.S.S.R., 126
nutrition, 2504t
pruning and training, 3207
varieties, 326r, 3325
Smog—*see under* Air pollution
Snails, harmful, 1190, 2153, 3093, 3596, 4175
Snapdragon—
diseases, fungus, 898, 1697, 2978, 3973, 4030o
flower colour and pigments, 2054e, 2977, 3041d
flower storage, 3960
nutrition, 2952
pests, 1697, 2962
physiology, light responses, 2952, 3972
polyploid, 2422
potting composts, 1969
seed germination, 2955
Snowdrop, phenological data, 3041w
Sodium—*see also* Salts—
azide, respiration inhibited by, 3960
contents of roots, plant collapse associated with, 4070
determination, 3315x, 3316b
nutrition of plants, 661, 1692, 2744, 3733, 4052, 4112
plants injured by, 830, 2057, 3066, 4070
Soft fruits—*see* Small fruits *and individual crops*
Soil(s)—
analysis as a guide to plant nutrition, 2260, 2267, 2305s, 2415m, 3052
compaction, 3119h, 4254t
conditioners and amendments—
Aerotil, 2952
Krilium (CRD 189), 1200, 2952
lignin, 3706

Soil(s)—conditioners and amendments (*continued*)—
machine for applying liquid, 1364
sodium ammonium polyacrylate, 80
wood shavings, 2349
conductivity, 3836
(and water) conservation—*see also* Planting, contour—
for annual crops, 2908j
a bibliography on, 2312
for deciduous fruit trees, 2452, 2455, 3390
research in Puerto Rico, 2152
for tropical and subtropical fruit and plantation crops, 1146, 4237, 4255i
drainage, 220, 2312
garden, and their management, 3942
heating with electricity, 289, 2539, 4282
maps—*see below under* surveys
micro-organisms, pathogenicity, factors affecting, 2864j
micro-organisms, plant growth affected by, 2512, 3084
moisture—*see also below*, water—
earthing up trees to conserve, 1053
conditions in Florida citrus areas, 2148x
determination, 116, 1367, 1368, 1374x, 1688, 2413, 3315q, 3434, 4222
pH, micronutrient retention affected by, 2083
pH, plant needs and responses, 666, 2400, 3104, 4011
potting, 1988, 2053r, 2960, 2986
salinity, 81-83, 1352
sickness—*see also* Replanting—1521, 2330, 2561, 3474, 3538, 4282
sterilization—*see also* Fumigation, soil—
a book on, 2318
equipment, 3306
plant growth retarded by, 2350
by steam, 111, 725, 1356, 3306
by various methods, 732p
surveys of the Belgian Congo, 2305o
surveys of Java, 3196
temperatures, 84, 989, 3356
water holding capacity, factors affecting, 84, 1531
water table, crop responses to, 1447, 2201, 3063
waterlogging, crop responses to, 2272
Soilless culture—
aeration in, 2447
the Bengal system, 2311
a book on, 2311
equipment and containers, 97
growth-substances transfer from one plant to another in, 4020
of house plants, 1961
nutrients and media for, 98, 875, 886, 4014
for nutritional studies, 89, 675, 681, 715, 865r, 1184, 1692, 2841, 3283, 3287, 3289, 3721, 3722, 3806
of ornamentals, 98, 886, 1991, 2949, 2969
root-cap structure affected by, 4014
systemic insecticides used in, 2277
Soilless culture (*continued*)—
temperature requirements, 2447
of vegetables, 2840
Solanaceous plants, diseases, virus, 1822
Solanaceous plants, grafting—*see* Grafting
Solanum—
incanum, 1656
quitoense, 3119o
torvum, 3606
Somaliland, crops, 1068h, 4255r
Sonchus arvensis, 2706
Sophora japonica, 4012
Sorbus spp., as rootstocks for cotoneaster, 4018
Sorghum halepense, 459, 1661, 2683-2687
South—
Africa(n)—
crops—
deciduous fruit and nut trees, 135, 142, 1293, 2503z, 3225
evergreen fruit and plantation crops, 1293, 3160, 3221, 4128f
ornamentals, 975k
small fruits, 1478
vegetables, 527, 3778
Division—
Bot. Plant Path., A.R., 3080
Citrus subtrop. fruit Res., A.R., 3221
decid. Fruit Res., A.R., 3225
Ent., A.R., 3224
Hort., A.R., 2739
Tobacco Res., A.R., 2868
Sugar Year book, 3160
Australia—*see under* Australia
Pacific territories, crops, sago, 3191t
Pacific territories, dye plants, 1917
Southern Rhodesia—*see* Rhodesia
Spacing—*see individual crops under* planting *or* spacing
Spain—
crops, fruit, 2148 l
crops, various, 2415a, 3751
register of plant varieties, 3236
Spathodea campanulata, 2053j
Spearmint—*see under* Mint
Spectrographic analysis and spectrography, 94, 1303, 1307, 3594
Spergula arvensis, 2706, 2730
Sphaeroblasts on trees, 3355
Sphaerotheca—
humuli, 525, 2521
mors-uvae, 267, 2515
pannosa, 939, 1563
spp., unspecified, 2028
Sphagnum moss, composition, 865f
Sphagnum moss in propagation, 117i
Spicaria spp., unspecified, 4131
Spilonota ocellana, 1513
Spinach—
climate, air pollution, 1535, 3248
composition, 1535, 2744
diseases, resistance, 3811, 3812
diseases, virus, 1838c
field experiments, design of, 3813
flower biology, 687

Spinach (*continued*)—
flower bolting, 1798
nutrition—
foliar, 2832
manuring and major elements, 689, 2744, 2832, 3704
minor elements, 688, 1691, 3290, 3704
packing, 530, 690
pests, 1799
physiology, 687, 2371
polyploidy induced, 2422
seed—
germination, 537
hybrid, 687
rates and spacing, 1798
treatment, 1685
soil management, irrigation, 1688, 2747
soil management, weed control, 494, 2717, 3651, 3674
varieties, 530, 3811, 3812, 4288
Spiraea—
forcing, 2032
pests, 2774
plants, packing and storage, 881
variegation in, 947
Spodoptera mauritia, 3996
Spray(s) (ing)—
concentrate, 373, 374, 435, 440-443, 445w, 546, 2670q, 3123, 3310, 3503, 3504, 3584, 3598c, 3598o, 3784, 4134, 4135
coverages or deposits, 435, 444, 1068g, 1637, 3585
economics, 2102
equipment—*see also* Dusters—
booms, 439, 1023
for brussels sprouts, 2864e
decontamination after applying herbicides, 1674
for experimental purposes, 114, 3597r, 3597s
general-purpose, 1371
knapsack, 3184
light-weight machines for the tropics, 1074
low-volume, 438, 1369, 1371, 1640d, 3597r, 3597s
nozzles, 1370
for orchard and plantation crops, 1234x
platforms and ladders, 3586
pumps, 1369
injury to plants—
factors affecting, 3083
ornamentals, 970
vegetables and tobacco, 2754
materials, approval scheme, 445s
materials, compatibility tables, 445o, 732o
particles, studies on, 445h, 445i, 546, 1637, 2866j, 3610
programmes—
in Canada, a survey, 1622
for citrus, 1068b, 2098
for deciduous fruits, 2671v, 3597a, 3597o, 3597v, 3598h
residues—*see also particular crops and types of sprays*—
Spray(s) (ing)—residues (*continued*)—
leaf analysis affected by, 3590
on plants and in foods and their determination, 434, 437, 1631, 1701, 2652, 2665, 2671 l, 2857, 2864 l, 2864y, 2865h, 2866q, 3591, 3593, 3594, 3597a
removal from crops, 733g
in soil, 2665
Squash (*Cucurbita moschata* and *C. pepo*)—*see also* Cucurbits, Marrow *and* Pumpkin—
composition, 263, 2744, 3222
diseases, 3743
fruit set and parthenocarpy, 592
growing in various countries, 2866i
growth, herbicides affect, 2731
nutrition, 2744
pests, 1738
seed germination, 537, 3222
seed treatments, 2750
varieties, 2865y
weed control, 500, 501, 510, 3675
Squirrel—*see under* Rodents
Stagonospora sacchari, 1197
Staking, machines for, 2865z
Starch—
content, flower development affected by, 4056
determination, 3124, 3315v
hydrolysis, products of, 2882
metabolism, 3796
Starter solutions, 1374o, 3472
Statice diseases, 4276
Station Rech. vitic. Arbor. fruit. Sud-Ouest, Rep., 1378
Statistical—
analysis of trials, 118c, 118h, 1251, 1830, 3242
design of trials, 13, 118h, 1096, 1251, 1636, 2398, 3239-3242, 3813
growth correlations, 1180, 4038
methods for—
estimating—
heat requirements in glasshouse, 2415g
leaf area, 2401
rainfall expectation, 2341
yield decreases following cessation of manuring, 1225
forecasting crops, 1143
measuring tree growth, 2399
pest and disease studies, 3522
sampling, 445f, 2400, 3241, 3317, 3318, 3522
tasting trials, 1127, 2402
Statistics—*see* Agricultural statistics *and* Trade, *and for their use in experiments*, Statistical
Stellaria media, 472, 493, 2733
Stem-builder—*see* Interstock
Stemphylium botryosum, 912
Stephanitis globulifera, 3023
Stereum purpureum, 2656, 2671e
Sternbergia lutea, 1996
Sterrhopteryx hirsutella, 423
Stethorus punctillum, 402

Stewartia spp., ornamental, 1956
Stictocephala (*Ceresa*) *bubalus*, 1601
Stock (*Matthiola* spp.)—
breeding, selection and genetics, 974n, 1989, 1990
diseases, 515, 3947
flower bud initiation and development, 900
light responses, 900, 2979
nutrition, 4030e, 4031c
research in Germany, 870
seed germination, 899
seed treatment, 3947
temperature responses, 1989, 3974
varieties, double-flowered, 899, 974n
varieties, various, 2950
weed control, 515
Stockbridge House exp. Hort. Stat., N.A.A.S., 4294o
Stomata in flowers, 2054b
Stomatal guard cells, 44, 1322
Stomatal movements, 351, 2054f
Stone fruits—*see also separate fruits*—
diseases, bacterial, 362
diseases, virus, 3597t
flower emasculation, 260 l
fruit drop, 340
pests, 3558
pruning, 3358
rootstocks, own roots as, 3342
seed germination, 3336
Storage—
buildings and chambers—*see also below*, gas—
air—
circulation and flow in, 3406
leakage prevention in, 2494, 3311
purification in, 1458, 3397, 3399
cellars, 1455
cold, 2492-2494
cooling and pre-cooling systems—*see below*, cooling
humidity control in, 1457, 2495, 2496, 3130
insulating materials for, 248
paints and preservatives for, 249, 3408d
ventilated or air-cooled, 247
clamps for vegetables, 2773
coatings, 1036, 1037, 3100, 4100, 4102, 4106, 4128a
cooling methods and responses, 2122, 2123, 3810
dips, 238, 387, 388, 1036, 4102, 4103, 4105, 4106, 4124
diseases and disorders, ammonia gas to prevent, 4109
diseases and disorders, nitrogen trichloride gas to prevent, 4102
ethylene used in—*see* Ethylene treatment
frozen pack, of fruit, 3436
of fruits—*see also separate fruits*—heat storage capacity and conductivity coefficients, 2124
of fruits, reviews on, 1455, 1456, 2504r, 3408k, 4286
Storage (*continued*)—
gas, 207, 240, 260v, 1459, 2492, 2494, 2495, 2498, 2500, 3311, 3403, 3407, 4099, 4281
liners and bags, plastic—*see under* Plastic
of nursery stock, 3351
of vegetables—*see also separate crops*—reviews on, 1455, 1456, 4286
wraps, 3099, 4101, 4102, 4104
Strategus quadrifoveatus, 1140
Strawberry—*see also Fragaria*—
breeding and selection, 272, 275, 392, 3456i, 3456k, 4288
climate—*see also below*, physiology—
spring frost injury and resistance, 275
spring frost protection, 347
wind protection, 1526
composition—
fruit and juice, 263, 278, 1264, 2521, 2529, 2558x
leaf, 276, 2459
root, 276
diseases—
cause uncertain, root rots, 445p, 1581, 3459
fungus—
fruit rots, various, 1568, 2521, 2670z, 3529
grey mould (*Botrytis cinerea*), 272, 389, 390, 1264, 3457, 3527, 3528
leaf spot (*Mycosphaerella fragariae*), 3459
leathery rot (*Phytophthora cactorum*), 3530
mildew (*Sphaerotheca* spp.), 525, 2521
red core or red stele (*Phytophthora fragariae*), 272, 391, 445a, 3531, 4288
wilt (*Verticillium* spp.), 392, 1514, 3532
non-parasitic, genetical breakdown, June or transient yellows and streak, 4288
virus, 1550, 2581, 2582, 2671k, 3213, 3459, 3496, 3597j, 3597k
flower bud initiation and development, 277, 3429, 3435
forcing, 279, 280, 2521, 3223
fruit—*see also above*, composition—
colour evaluation, 326k
development *in vitro*, 2381
flavour, sprays affect, 390, 2665
packing, 269
pigments, 278
storage, 387, 3529
growing—
a book on, 4294a
in the U.S.A., 2558j
in various European countries, 1477, 1510m, 2558w
in various tropical and subtropical countries, 1476, 2558b, 3425
growth phases, 1480
growth, root temperature affects, 276
leaf development, 3428
nutrition—
foliar, 976
manuring and major elements, 282, 2459, 2521, 2959, 3432

Strawberry—nutrition (*continued*)—
minor elements, 3433
sodium chloride and salt tolerance, 339
pests—
aphids (*Pentatrichopus* (*Capitophorus*) and other spp.), 1596
centipede (*Scutigerella immaculata*), 415
crown borer (*Tyloderma fragariae*), 408
leaf roller (*Ancylis comptana fragariae*), 408
meadow spittlebug (*Philaenus leucophthalmus*), 408
mites (*Tarsonemus* and *Tetranychus* spp.), 408, 1589, 2521, 2670s, 2963, 3542, 3543
nematodes, 397, 445p, 1579-1582, 2617, 2671m
root weevils or white grubs (*Otiorrhynchus* and *Brachyrhinus* spp., etc.), 408, 1514
physiology, photoperiodic and other light responses, 277, 1481, 2531, 3429-3431, 4288
physiology, temperature responses, 276, 277, 1481, 2531, 2532, 3429, 4288
planting—
dates, 2521, 2530
stock—
heat treatment, 2410, 2671n, 3589
packing, 880
production of certified, 3531
roguing, 3427
storage, 881, 2530
systems, 1479
polyploidy, induction and effects, 275
roots, mycorrhiza, 2534
roots, temperature, growth affected by, 276
runners—*see also above*, planting stock—
formation—
day length affects, 1481, 3430, 3431
growth substances affect, 2533, 2678
temperature affects, 2532
seed treatment, 3420, 3421
soil—
management—
fumigation, 3532
irrigation, 339, 733c, 3434, 3435
mulching, 1482, 1568, 3433
peat applications, 281
weed control, 471, 472, 489, 525, 1479, 1653, 2417, 2690, 2692, 2737a, 3600, 3622, 3650
structure, growth affected by, 391
spray residues on fruit, 390, 434
variety(ies)—
Auchincruive Climax, 4288
in Austria, 2558 l
Cambridge, 1479, 2522
classification and identification, 2527
climbing, 2528
in Denmark, 2523
everbearing, 2558g, 3431
in France, 2558g
in Germany, 2524, 2525
in Great Britain, 270, 1275, 1280, 2522
in Holland, 273, 274
Strawberry—variety(ies) (*continued*)—
Jerseybelle, 1510f, 3456c
Madame Moutot, 1510m
in North Africa, 3425
for processing, 326f, 2526, 3436
in South Africa, 1478
Talisman, 271, 2558w
in the U.S.A., 1264, 1274, 1393, 2503r, 3426, 3429, 3456g
Strobilanthopsis linifolia, 2928
Stromatinia gladioli, 2999, 3000
Strontium in soils and plants, 3288-3290
Strophanthus—
arnoldianus, 2924
sarmentosus, 3939s
spp., seed glycosides, 865e, 2924
spp. in Puerto Rico, 1272
Strumeta tryoni, 3087, 4093
Strychnos spp., alkaloids, 865a
Stylosanthes gracilis, 4239
Subtropical crops in Bulgaria, 1068v
Succinic acid in fruits, 3402
Succulents, culture, 4031k
Sucrose, foliar application to plants, 675, 732n
Sucrose, radioactive, 1312, 3283
Sugar(s)—*see also individual sugars*—
cane—*see* Sugar-cane
determination and separation, 27, 259, 1126, 2864a, 3119s, 4256e
Exp. Stats, Queensland Bureau of, A.R., 2248
injection into plants, 751
maple—*see* Sugar-maple
Planters' Ass. Exp. Stat. Cttee, Hawaiian, A.R., 2246
in plants, day-length affects, 1198
production and trade, 1191
radioactive, 2558x
translocation in plants, 3283
Yearbook, *South African*, 3160
Sugar-cane—*see also Saccharum*—
bagasse, 3707, 4205, 4206
breeding, 1193, 2271, 4254z
by-products, 3192r
climate—*see also below*, physiology *and* soil management, irrigation—
drought responses, 2270, 4221, 4255t
rainfall responses, 2249, 4221
storm and drought insurance, 1234o
temperature responses, 1198, 2264, 2266
wind injury and its prevention, 4224
composition—*see also below*, juice *and* sucrose—
analytical methods for, 4256e
fibre, 2282
various elements, 1205, 2257, 2259, 2262, 2264-2266, 4206, 4209
diseases—
bacterial, leaf scald (*Xanthomonas albilineans*), 1213
fungus—
leaf scorch (*Stagonospora sacchari*), 1197
red rot (*Physalospora tucumanensis*), 1214

Sugar-cane—diseases—fungus (*continued*)—
rust (*Puccinia kuehnii*), 2306s
sett rot (*Phytophthora* spp.), 2275
smut (*Ustilago* spp.), 1215, 3210
general, roguing of infected stools, 3169
general, in various countries, 3172
non-parasitic, droopy top, 4254b
varietal resistance, 1213
virus—
chlorotic streak, 1211, 3170, 3171, 4226
Fiji disease, 3172
mosaic, 3191n
ratoon stunting, 1212, 1235p, 2273, 2274, 2305t, 3172-3175, 4291
yield responses as compared with healthy cane, 2273, 3173, 3175, 4226
factory wastes—*see also below*, nutrition—as manures for crops other than cane, 1202
fibre content and structure, 2282, 4232
flowering and its control, 2270, 3162, 3163, 4221, 4225
growing in—
the French West Indies, 1234m
Hawaii, 2150
India, 1192, 2247
Pakistan, 2305w
South Africa, 3160
growth—*see also below*, physiology—
chlordane affects, 2276
growth substances affect, 1198
lateral shoots, removal or reduction, 2269
lodging, 2249, 4224
measurement correlations, 1197
harvesting—
burning to assist, 1207
machinery and equipment, 2280, 2281, 2305y, 4255w
storage after, 1208
topping, 3168
juice—*see also above*, composition—
analytical studies, 4209
quality, determination, pol ratio method an alternative to, 2282
quality, factors affecting, 1206-1208, 2258, 3168, 4210, 4214, 4215, 4218, 4223, 4255t
leaf—
analysis—*see above under* composition, *and below*, nutrition
area, other characters correlated with, 2256
sheath, crop logging, 2257, 2265, 2305 l
machinery—*see also above*, harvesting, *and below*, transport—1209, 1235f, 2268, 4255g
marketing, 3231
nutrition—*see also above*, composition, *and below*, soil management—
boron, 1203, 1205, 2262
calcium, 1203, 1205, 2259, 2261, 4209, 4210, 4211
copper, 1203, 4254b
factory wastes for, 1201, 1202, 4205
fertilizer application by aircraft, 2306u, 4255z
Sugar-cane—nutrition (*continued*)—
fertilizer application in irrigation water, 2305m, 2305r, 2306o
foliar application, 4206
iron, 1203, 2262
leaf analysis a guide to, 1203, 2257, 2262-2265, 2267, 2305s, 3166, 4209, 4210, 4220
magnesium and manganese, 1203, 2262
manuring, 1194, 1279, 3196, 4210, 4212-4214, 4219
molasses for, 4255y
nitrogen, 1203, 2258, 2259, 2261-2264, 2306o, 3165, 4209, 4214-4219
phosphorus, 1203, 1204, 2258, 2259, 2262, 2263, 2265, 2266, 2305s, 3167, 4206, 4209
potassium, 1203, 2258, 2259, 2261-2264, 2267, 2305s, 4209, 4211, 4220
selenium, 1205
soil analysis a guide to, 2260, 2267, 2305s
stalk and juice analysis a guide to, 2259, 2262, 2266, 4209
sulphur, 1205
zinc, 1203, 4254b
parasitic plants attacking, 1210
pests—
aphids (*Aphis* and *Sipha* spp.), 2277, 4131
borers—
Chilotraea infuscatella, 4228
Diatraea spp., 1234c, 2278, 4227, 4254j
Emmalocera depressella, 4228
Scirpophaga nivella, 4228
control, biological, 4131, 4227, 4254j
cutworm (*Agrotis flammetra*), 4229
froghopper (*Aeneolamia varia saccharina*), 4230
general, yield reductions due to, 2278
leafhoppers (*Pyrilla* spp.), 1207, 4231
mites, 2277
nitidulid beetles (*Carpophilus humeralis*), 3176
termites, 2279
physiology—
photoperiodic and other light responses, 1198
photosynthesis, 1199
translocation of nutrients, 2264-2266
water relations, 1199, 4254m
planting—*see also below*, setts—
methods compared, 4205-4207
spacing, 4206, 4207
time of, 4207
pollen fertility, 4225
pollination, 2271, 3162
production and trade, 1069, 1293, 3191x
propagation—*see also below*, seedlings *and* setts—by marcotting, 4254h
quarantine in Trinidad, 2306v
research in—
Australia, 2248
British Guiana, 4294b
Ceylon, 1257
Hawaii, 2246
India, 2247

Sugar-cane—research in (*continued*)—
Kenya, 3219, 4283
Mauritius, 3161, 4284
Pakistan, 4255k
St. Vincent, 2306 l
seedlings, raising, 3164
setts—
germination, factors affecting, 1197, 2275, 4202, 4216
treatments—
dipping equipment, 1211, 1235f, 3172
fumigation, 4204
fungicide and insecticide, 2254, 2276, 2305g, 3176, 4201-4203
growth substance, 1198
heat, 1212, 2273, 2274, 3170, 3171, 3173, 3174, 4226, 4291
soaking in lime-water, 4202
soaking in water, 4202, 4207
soil—
compaction by machinery, 4254t
erosion under, 2152
management—
cultivation—
earthing-up, 3165
inter-row, 2268, 3165, 4205-4207
mechanical *vs.* hand, 4208
irrigation, 1199, 2270, 4215, 4222, 4223, 4254m, 4254s
mulching, 4205, 4206
soil conditioners, 1200
weed control, 476-478, 1658-1663, 2248, 2725-2729, 3645-3648, 3693b, 4206
waterlogging and flooding, 2272
stalk analysis—*see above under* composition *and* nutrition, stalk analysis
stalk anatomy, 2255, 4232
storage of harvested, 1208
stubble shaving, 1209
sucrose—
contents, effects of 2,4-D on, 1206
content, factors affecting, 1198, 2258, 4210, 4221
sampling and measurement, 2282
transport, 3192k, 4254f, 4255g
variety(ies)—
in Australia, 2249
in Barbados, 1193
in British Guiana, 1194, 1234j
Co. L.29, 1196
in Cuba, 2251
in Formosa, 1197, 2252
in the French West Indies, 3163
in India, 1196
in Kenya, 1195
lodging resistance, 2249
in Mauritius, 3162
N:Co. 310, 1210, 2306p
in the Philippines, 4212
in South Africa, 3191x
in the Sudan, 2305n
in Trinidad, 1278
in the U.S.A., 2253
in various Latin American countries, 2250
Sugar-maple—
diseases, 3931
growth and physiology, 1954j
sap collection and composition, 3930
sap flow, factors affecting, 1954t, 3929
tree crowns, sap production related to, 1950
Sulphanilamide, growth inhibition by, 1340
Sulphates, soil conductivity affected by, 3836
Sulphates, toxicity, 4052
Sulphur—
dioxide injury to plants, 1534, 2092, 2347, 3245, 3248
nutrition of crops—
ornamentals, 4019
sugar-cane, 1205
tobacco, 761, 762
various, 865r
vegetables, 3315e
radioactive, 495, 2365
Sultana—*see under* Vine
Sumac—*see Rhus*
Sumatra—*see under* Indonesia
Summerland, B.C., Canada Dep. Agric., A.R., 3229
Sun-burn injuries to plants and methods of protection, 683, 1716, 4249, 4250
Sunflower—
composition, 118b
growth substance responses, 62
light responses, 2369
nutrition, 715
root growth, 1818
temperature responses, 3250
tissue culture, 62, 1326
Surinam—
Dep. Agric., A.R., 2332
crops, 4127c
land classification, 1235c
Swede—*see also* Brassicas—
breeding and selection, 3695
pests, 1698, 1786
varieties, 3695
weed control, 2704, 2709, 2730
Sweden—
crops—
small fruits, 3410
tree fruits, 260h, 260k, 260u, 2504j
vegetables, 2865m
horticulture, 117t
imports of horticultural products, 117 l
Sweet pea—
diseases, 3947
forcing, 1991
light and temperature responses, 2980, 3975
packing, 4031q
seed treatment, sowing and germination, 3947
soilless culture, 1991
Swiss chard, seed treatments, 2750
Switzerland, crops, fruit, 3408g, 3408u
Symphytum spp., varieties, 3695
Synanthedon pictipes, 2671s
Syria crops, 1262

Tabernaemontana spp., latex, 851
Tabernanthe iboga, 820, 1265
Tagetes patula—*see* Marigold
Tagetes spp., varieties, 2698
Tahiti, medicinal plants, 1954w
Tamarindus indica, 1235k, 1235o
Tanacetum vulgare, 821
Tanganyika—
  Dep. Agric., A.R., 3230
  Govt Chem., A.R., 3234t
  Sisal Res. Stat., Mlingano, Ngomeni, A.R., 832
Tannin—*see also* Polyphenols—plants—
  mangroves, 2947
  Rhus spp., 1954k
  Terminalia chebula, 3939 l
Taphrina deformans, 384, 2605, 2606
Taraxacum spp., propagation, 72
Tarsonemus pallidus, 2521, 2963, 2964, 3543, 3959
Tarsonemus translucens, 2237
Tasmania—*see under* Australia
Taste panels, estimation of food quality by, 1127, 2402
Taxus spp.—
  pests, 2054d, 4029
  photoperiodic response, 4028
  propagation by cuttings, 1964, 4028
  weed control, 475, 2695, 3642, 3643
Tea—
  Ass., Indian, Tocklai, A.R., 2284
  Ass., Indian, Tocklai, Commission of Enquiry on, 2283
  a book on, 3177
  breeding and selection, 3179, 4256c
  bush uprooting, 4254k
  climate, cold resistance, 4235
  clones—*see also below*, varieties—1218, 2285, 2288
  composition—*see also below*, nutrition *and* quality—
    gallic acid, 4243
    green *vs.* yellow leaf, 2296
    moisture, 4248
    ploidy in relation to, 4235
    polyphenols, 260f, 3182, 3183, 3191m, 4242, 4255q
    regional variations in, 4241
  diseases—*see also below*, spraying—
    causes various, rim blight or marginal necrosis, 2291
    control, general, 4244
    fungus—
      anthracnose (*Gloeosporium theae-sinensis*), 4243, 4244
      black rot (*Corticium* spp.), 1235n
      blister blight (*Exobasidium vexans*), 1228, 1229, 2285, 2292, 3191y, 4233, 4234
  economics, 4254u
  flavour, sprays affect, 1230
  flowering and fruit drop, 4240
  growing—
    in Africa, 4254y
Tea—growing (*continued*)—
    hedge system, 1222, 1223
    in Indonesia, 4255x
    in the U.S.S.R., 3177
  growth, ageing of clones, 1220
  growth, spiral, in seedlings, seed desiccation causes, 2286
  leaf composition—*see above under* composition
  machinery, factory, 2297, 2298
  machinery, field, 3184, 4254k
  manufacture, 1216, 1217, 2297, 4248, 4254x
  nutrition—*see also below*, shade *and* soil management—
    foliar, 4234
    manuring, 1217, 1224, 2289, 3196
    minor elements, various, 1226
    nitrogen, 1225, 2288-2290, 3181
    potassium, 2289, 4234
  pests—
    flush worm (*Cydia leucostoma*), 2295, 4246
    mites, red spider (*Metatetranychus* (*Paratetranychus*) *bioculatus*), 2293
    mites, various, 2294, 4233, 4247
    mosquito bug (*Helopeltis* spp.), 1234q
    termites, 1234p
  physiology, photosynthesis, 2288
  planting, of cuttings direct in field, 1222
  pollination, 3179
  production and trade, 1069
  propagation—*see also below*, seed—
    by budding, 2287
    by cuttings, 1217, 1219-1222, 2287, 3180, 4234
    nursery techniques, 1234y
  pruning and centering, methods, 1223, 1227, 1234u
  quality—
    altitude affects, 3191q
    sprays affect, 4244, 4245
  research—*see also above*, Ass., Indian—
    Inst. Ceylon, A.R., 1216
    Inst. Ceylon, work at, 1257
    Inst. East Africa, A.R., 1217
    in various countries, 1271, 3178, 4278, 4284
  sci. Sect., United Planters Ass., Southern India, A.R., 3178
  seed—
    disinfection, 2286
    gardens, 1219, 3179
    germination, 2286, 4236
    storage, 4236
  shade—
    nutrition in relation to, 2288, 2289
    physiological effects, 2288
    tree species, 1217
  soil—
    conservation, 4237
    management—*see also above*, nutrition—
      cover crops and green manures, 4238, 4239
      mulching, 1217
      weed control, 1217, 1234r, 3649

Tea (*continued*)—
spray(ing)—*see also above*, diseases *and* pests—
machinery, 3184
materials, recommended, 1234r
organization, 1234x
quality affected by, 1230, 4244, 4245
varieties, diploid and triploid compared, 4235
yields, estimated decrease following cessation of manuring, 1225
yields, measurement, 2288
Teasel (*Dipsacus* spp.), 1952
Telfairia pedata, 3926
Temperature(s)—*see also under* Chilling, Climate, Heat, Meteorology *and* Soil—
controlled, for plant studies, 766
enzyme activity affected by, 3982
fluctuations, plant exudations stimulated by, 3037
leaf, transpiration affected by, 4063, 4064
low, chilling injury, physiological aspects, 1970, 3250, 3251
low, plant responses to, a review, 4
measurement, of air, 1298, 2415s
nucleus staining affected by, 2010
nutrient absorption affected by, 2266, 3043, 4048
pollen viability affected by, 3101, 3144
responses of plants—*see also* Forcing *and* Bean (*Phaseolus*), Chrysanthemum, Pea, Sugar-cane *and* Tomato *under* climate *or* physiology—
fruits and nuts, temperate, 276, 277, 1070, 1417, 1433, 1481, 2531, 2532, 2539, 3356, 3429, 4288
fruit and plantation crops, tropical and subtropical, 989, 1068s, 1070, 2060, 2136, 2175, 3047, 3067, 3068, 3119q, 4065, 4114, 4116
light intensity affects, 1970
ornamentals, 73, 883, 911, 1970, 1989, 2013, 2952, 2973, 2983, 3301, 3974, 3975, 4020
various, 766, 2918, 3901-3903, 3929
vegetables, 610, 646, 671, 679, 687, 1698, 1709, 1747, 2824, 3250, 3251, 3788, 3800, 3803
root development affected by, 73, 1964
root, nutrient uptake affected by, 4048
sap flow affected by, 3929
seed germination affected by, 537, 1324, 2216, 3041x, 3337
sums for peas, 1747
tissue culture affected by, 1326
of tree crowns, 2450
Tenuipalpus obovatus, 2294
Tenuipalpus pseudocuneatus, 4072
Terminalia chebula, 3939 1
Termites and their control, 782, 1234p, 2279, 3102
Tetranychus—
althaeae, 1590
bimaculatus, 398, 406, 408, 879
Tetranychus (*continued*)—
pacificus, 2633, 3544
schoenei, 401
sexmaculatus, 2066, 2108
spp., unspecified, 1735
telarius, 401, 1020, 2107, 2628, 2865r, 2933, 3457, 3542, 3912, 4005
urticae, 402, 403, 1585, 1586
yumensis, 2109
Tetraploid plants—*see also* Polyploidy—732y, 833, 834, 1395, 1396, 2967, 2981
Tetrazolium and its derivatives for detecting injuries on fruits, 3098, 4108
Tetrazolium and its derivatives for testing seed viability, 1683, 3753
Thailand, crops, 4128n
Thamnosphecia pyri, 2671y
Thecla basilides, 1171
Theobroma spp.—*see also* Cacao—of Brazil, 1234t
Theognis gonagra, 3143
Thespesia populnea, 2054b
Thevetia peruviana, 851
Thielavia basicola, 747, 1883, 2899
Thielaviopsis basicola, 742, 744, 793, 2050
Thinning—*see* Growth substances, fruit and flower thinning
Thiourea as a growth substance, 2390
Thiouracil, radioactive, 2893
Thornapple—*see Datura*
Thrips—*see also individual species*—
angusticeps, 633, 1763
control, 797, 1616, 4006
multiplication, plant nutrient status affects, 1125
tabaci, 546, 733a, 797, 3855d
Tilia platyphylla, 4011
Tilia sp., flower bud development, 3252
Tissue—
analysis—*see* Leaf
culture, 38, 40, 41, 43, 46, 58, 62, 118g, 611, 772, 977, 1285u, 1326, 1374i, 1779-1781, 2379, 2381, 2385, 2386, 2415b, 2866n, 3259, 3285, 3316e
preparation and preservation, 1372
Tobacco—*see also Nicotiana*—
bales, fumigation, 1902
a book on, 1237
breeding and selection, 737-739, 1846, 1849, 3857, 3892h
broomrape (*Orobanche* spp.) on, 457, 523p, 1646
chemistry—*see below*, composition *and* physiology
climate—
artificial, for growth studies, 766
disorders associated with, 3878
frost protection, 2873
general aspects, 802m, 1842
leaf composition affected by, 2870, 2890
micro-, 765
rainfall, 2870
temperature responses, 766
wind damage, 3877

Tobacco (*continued*)—
composition—*see also below*, curing *and* physiology—
alkaloids, 751, 752, 774, 776, 778, 779, 1877, 1878, 2870, 2885, 3870, 3891
carbohydrates, 751, 770, 771, 774, 775, 1865, 1866, 2875, 2888
chlorophyll, 802u
dry matter changes during growth, 1872
factors affecting, 757-760, 775, 787, 1873, 1884, 2870, 2888, 2890, 2903, 2907, 3867
glycosides, 802 l
growth substances, 3868
mineral, 760, 763, 781, 1860, 1871, 1873, 3863
moisture content, 3892n
nitrogen compounds, 770, 771, 774, 775, 1865, 1866, 1884, 2870, 2875, 2881, 2908h
organic acids, 770, 771, 780, 802r, 1865, 1866, 2881, 2883, 2886, 2908k, 3765, 3892o
phenolic compounds, 780, 802p
of seeds, 3876
curing—*see also above*, composition, *and below*, fermentation—
air, 802i, 2903, 3857
barns, chambers and equipment, 1879, 1880, 3857, 3888-3890, 3892d
chemical changes during, 1866, 1868-1870, 1903e, 3869, 3891
flue, 802i, 1879, 1880, 2903, 3888, 3889, 3891, 3892e
mechanization of operations in, 800, 1855, 1882
midrib incision as an aid to, 2904
mould prevention during, 2905
speed, leaf type affects, 1881
sun, 1859
diseases—
bacterial—
barn rot (*Erwinia aroideae*), 2908d
blackfire (*Pseudomonas angulata*), 791
Granville wilt (*Pseudomonas solanacearum*), 775, 1896, 2897
wildfire (*Pseudomonas tabacum*), 742, 782, 791, 802v, 1890, 2894-2896, 3881
cause uncertain, fern-leaf, 2890
cause uncertain, frenching, 749, 783
fungus—
anthracnose (*Colletotrichum* spp.), 784, 3882, 3883
barn rot (several organisms), 1903j, 2908d
black root rot (*Thielaviopsis basicola*), 742, 744, 747, 793
black shank (*Phytophthora* spp.), 742, 786-790, 2872
blue mould (*Peronospora tabacina*), 1851, 1892, 3883, 3884
brown spot (*Alternaria longipes*), 757, 782
damping-off (*Pythium* and other spp.), 792, 2900, 3884
Tobacco—diseases—fungus (*continued*)—
frog-eye spotting (*Cercospora nicotianae*), 782, 1891
moulds developing during processing, 2905
powdery mildew (*Erysiphe cichoracearum*), 785, 2660
Thielavia basicola, 2899
wilt and chitri (*Fusarium* spp.), 743, 775, 2898
general, in various countries, 1883, 3856o
nematode-induced, brown root rot, 1897
non-parasitic—
leaf breakdown, 758, 3867
nutritional, 758, 783
weather fleck, 3878
varietal resistance, 742-744, 782, 1846-1850, 2899, 3892k
virus—
host composition and nutrition affect, 3765
mosaic, 802g, 1821, 1848, 1850, 1870, 1886-1889, 2891-2893, 2908f, 2908h, 2908p-2908r, 3877, 3880, 3892g
pepper mosaic, 1848
potato X, 1885
ringspot, 775, 1885
seed transmissible, 2908g
tomato aucuba mosaic, 1884, 3879
yellow ringspot, 2908g
economics, 1855, 3892j
fermentation—*see also above*, curing—
chemical changes during, 1866, 1868-1870, 1877, 1878, 2907, 3869
control of environment during, 2906
moisture changes during, 801
re-drying after, 1903e, 3892 l
flower(s)—
abnormalities, 1845
bud formation and development, 767, 768, 3868
growth substances in, 1903g
male sterility in, 802q
fruit set and development, 802n, 2878
grading, 802b, 1903 l
growing in—
Australia, 1903k
the Belgian Congo, 1839
Canada, 1374k, 1840
Cuba, 2908 l
French territories, 802a
India, 735, 802o, 3892b, 3892m
Mauritius, 1903b
the Philippines, 3892i
Turkey, 802d
the U.S.A., 3892a
various European countries, 734, 736, 802c, 1237, 1903a, 3892f
growth—
maleic hydrazide affects, 1773, 2888
phases, 2877
substances in—*see below*, physiology
harvesting—
costs, 3892j

Tobacco—harvesting (*continued*)—
mechanical, 2876, 3887
priming, 2876, 3857
time of, 779
wilting after, 3857
hybridization, vegetative, 773
leaf(ves)—*see also above under* composition *and below*, quality—
anatomy, 2378
morphology and structure, factors affecting, 759, 769, 1863
nutrient excretion by, 2908o
marketing, 3231
nutrition—
boron, 760
calcium, 3866
chlorine, 761-763, 1863
copper, 758, 1261, 3867
disease susceptibility affected by, 1885
disorders of, 758, 783
fertilizer placement, 3864
lead toxicity, 783
magnesium, 1858, 1859, 3863
manganese, 760
manuring, 753, 755, 756, 758, 1202, 1851, 1852, 1856, 1858, 1859, 1862, 3196, 3857, 3862
molybdenum, 760
nitrogen, 754, 757, 1852, 1857
phosphorus, 757, 1852, 2870, 2871, 3863-3865
potassium, 89, 754, 757, 759, 1852, 3863, 3866
sulphur, 761, 762
zinc, 1886
pests—
aphids, 782, 3885
budworms (*Heliothis* spp.), 1893
cigarette beetle (*Laspioderma serricorne*), 1902
corn root webworm (*Crambus caliginosellus*), 802s
crickets, 795
curculionid (*Mimaulus thesii*), 1898
general, in various countries, 794, 1699, 1900, 1901, 1903i, 3856o, 3892q
green June beetle (*Cotinus nitida*), 1899, 2908b
hornworms (*Protoparce* spp.), 796, 1893, 2908a
looper (*Plusia argentifera*), 745
nematodes, 782, 790, 798, 799, 1857, 1862, 1895-1897, 2897, 2898, 2901, 4291
Prodenia litura, 1903c
Sciara modesta, 3847
termites, 782
thrips, 797
wireworms, 3886
physiology—*see also above*, climate, composition *and* growth—
biochemistry, a review on, 3869
carbohydrate metabolism, 2882, 3892p
enzyme activity and distribution, 770, 771, 1865, 1867-1870, 1903m, 2370, 2881
Tobacco—physiology (*continued*)—
growth substance absorption, 3273
growth substance biosynthesis, 63, 802n, 1903g, 2889
nicotine and nornicotine biosynthesis, 773, 777, 2884, 3871-3873, 3875
nutrient excretion by leaves, 2908o
organic acids metabolism, 1874, 1875, 2887
photoperiodic responses, 767, 768, 2372, 3868
photosynthesis, 2369, 2371
protoplasmic constituents, factors affecting, 1867
respiration, 787, 789, 2377, 3880
tissue culture, 772, 2908i
translocation, 47
water relations, 766, 787, 788, 1863, 1864, 1872, 2908m
planting—
dates, 1853, 1859
mechanical, 3886
spacing, 1855, 1858, 1859, 1861, 3857
starter solutions to aid, 1854
pollen-tube growth, 1843
pollination, 63, 1903g, 2878, 2879
priming—*see above under* harvesting
production and trade, 1069, 1903a, 1903b, 2867, 3892b, 3892m
quality, burning capacity, 1863, 1864, 1873, 1903h
quality, factors affecting, 751, 752, 754, 760, 762, 763, 774, 1842, 1853, 1855, 1861, 1871, 1876, 1900, 1901, 2886, 2905, 3862, 3866
research in—
the Belgian Congo, 1839
Ceylon, 1257
Colombia, 1841
Germany, 3892c
Indonesia, 4278
Mauritius, 4284
New Zealand, 1256
Rhodesia-Nyasaland, 802t
South Africa, 2868
ringing, 2875
root anatomy, 802k
rootstocks, 773
seed—
-bed management, 746, 802e, 1261, 1851, 1852, 1859, 2900, 3222, 3681, 4291
composition, 3876
germination, 1324, 2880, 3298
numbers per capsule, 2878
oil, 1954s
production, 1259, 1858, 3863
sowing, time of, 2908e
treatments, 791, 2880
virus transmission in, 2908g
weight, 2879
seedlings, cotyledon numbers, abnormal, 1903d
shading, 769, 1863, 1881
soil—
conservation, 2908j

Tobacco—soil (*continued*)—
management—*see also above*, seed-bed—
cultivation, 748
fumigation, 747, 798, 1851, 1857, 2901
green manuring, 758, 1852, 1862, 2908j
irrigation, 87, 754, 764, 765, 779, 1861, 2872, 3222
methods compared, 2869
rotations, 747, 1862, 1894, 1895, 1897, 1903f
weed control, 1661, 2720, 2721, 3856o
requirements and types, 802f
spray(s)—
injury, 1899
insecticides, 1900, 1901
residues, 2902
statistics, U.S. Dep. Agric., A.R., 2867
stems, structure, factors affecting, 761
stems, sugar injection treatment, 751
suckers—
breeding to reduce, 738
chemical suppression, 749, 750, 1773, 1857, 2888
retaining some, 2874
topping, 779, 802j, 1860, 2908m
varieties—*see also above*, breeding—
in Belgium, 741
in Canada, 3857
cigar wrapper, 740
disease resistant—*see above*, diseases
in France, 740
in Germany, 3860
in India, 802h, 2908c
nematode resistant, 1897
in New Zealand, 744
pest resistant, 745
in the Philippines, 3861
in South America, 743, 3859
in the U.S.A., 742, 1844, 3892k
wrappers, leaves of *Carea arborea* as, 3858
Tomatine, properties, 1939
Tomato—
breeding and selection—
for disease resistance, 1280, 3222, 3228
for frost resistance, 531
general, 529, 530, 697, 3695, 3814
of tetraploids—*see also below*, polyploidy—732y
climate—
air pollution, 3710
cold injury to fruit, 2849
frost protection, 2406
frost resistance, 531, 2837
light and temperature responses—*see below*, physiology
composition—*see also below*, *under* nutrition—
fruit—
carbohydrates, 3315v
dry matter, 1831, 3855w
factors affecting, 705, 706, 708, 720, 1819, 2744, 2844, 3678, 3817, 3829, 3840
organic acids, 705, 1832
Tomato—composition—fruit (*continued*)—
pigments, 705, 707
vitamin C, 263, 706, 716, 3829
leaf, 713, 715, 1939, 2841
plant, 59, 1308, 1819, 2844
root, 3315g
diseases—*see also below*, sprays—
bacterial—
canker or wilt (*Corynebacterium michiganense*), 3897
crown-gall (*Bacterium tumefaciens*), 1941
spot (*Xanthomonas vesicatoria*), 721, 1824
wilt (*Pseudomonas solanacearum*), 1837r
control, general, 3856j
control by pyrites cinders, 3711
fungus—
anthracnose (*Colletotrichum phomoides*), 724, 2852
black dot or root rot (*Colletotrichum atramentarium*), 3842
blight, early, target spot, or collar rot (*Alternaria solani*), 724, 1633, 2853, 3839
blight, late (*Phytophthora infestans*), 722, 1698, 1824, 2855, 2864o, 3844
damping-off (various organisms), 1826
fruit rot (*Corticium solani*), 2852
grey mould (*Botrytis cinerea*), 691, 1261, 1824
leaf mould (*Cercospora fuligena*), 1825
leaf mould (*Cladosporium fulvum*), 691, 1280, 2405, 2781
soil-borne, 2752
stem rot (*Didymella lycopersici*), 3744, 3856v
wilt—
Fusarium spp., 723, 3843
Phytophthora parasitica, 786
toxins, 786, 1820, 2854
non-parasitic—
blossom-end rot, 2842, 2852, 3855r
cloud and/or blotchy ripening, 691, 2843, 3832, 3840
internal browning, 2850, 2864i
vascular browning, 732i, 1819
resistance, varietal—*see below*, varieties, disease resistant
virus—
big bud, 3841
general, 1822
mosaic, 3839
seed-borne, therapy, 1823
tobacco mosaic, 1823, 2891
twisted-leaf, 1821
yellow top, 2866h
economics, 2839, 3244
embryo culture, 3816
flower characters, 3856m
flower production, factors affecting, 3823
fruit—*see also above*, composition, *and below*, grading, packing, physiology *and* storage—
characters, 3817

Tomato—fruit (*continued*)—
colour, factors affecting, 705, 707
cracks, measurement of, 445z
quality, factors affecting, 705, 711, 3829
ripening, 705, 707, 708, 2836, 2846, 2849, 2850, 3829, 3835
set and parthenocarpy induced, growth substances affect, 2845, 3827
size, factors affecting, 2845, 3830
spray residues, 2866q
yield—
components analysed, 1830
estimation, 13
factors affecting, 2836, 2846, 2847, 3822
glasshouse—
construction, 2405
heating systems, 732d
ventilation, 2404
grading, 2865t, 3855g
growing—*see also below*, ring culture—
in the Arctic, 2865i
in European countries, 2503n
in the U.S.A., 3855t
in various countries, 691, 1837a
growth—
cycle, 3821
factors affecting, 699, 3817, 3828
root—*see below*, root
substances in, 3315g
substance responses—*see also above*, fruit set, *and below*, herbicide—53, 1807, 2846, 2866n, 3825, 3830, 3834
herbicide responses, 1671, 1673, 3601, 3678, 3679, 3849
hybrid(s)—*see also above*, breeding—
seed production, 3815
vegetative, 732g, 2864f
vigour, 533, 1802, 2865c
illumination—*see below*, physiology, light
leaves—*see also above*, composition—tomatine from, 1939
mutants, 1803, 3815
nutrition—
bacterial fertilizers, 2743
boron, 675, 716, 2845, 3283, 3284
calcium, 715, 2744, 2842, 3287, 3289, 4048
cation uptake, 1806, 2744, 4048
foliar—*see also below*, sucrose—1694, 2795, 2841, 2842, 2844, 2864n, 3223, 3290, 3838, 3856r
iron, 718, 1694, 1820
magnesium, 715, 2841, 3704, 3837, 3856r
manganese, 716, 717, 1811
manuring, 732l, 732r, 1202, 1268, 1810, 2744, 3221
minor elements, various, 4031c
molybdenum, 1691, 3838
nickel, 718, 3287
nitrogen, 712, 2841, 2844, 2864n, 3218, 3829, 3832
phosphorus, 713, 714, 2364, 2841, 2865e, 2866f, 3218, 3223, 3829, 3833, 3834
potassium, 89, 2841, 2843, 2866f, 3281, 3704, 3829, 3832, 4048
Tomato—nutrition (*continued*)—
strontium, 3289, 3290
sucrose, 675, 1280, 2844, 3283, 3825, 3831
sugars other than sucrose, 2845
sulphate, 3836
zinc, 1812, 2795
packing, fruit, 530, 2858, 3855g
pests—*see also below*, sprays—
aphids, 2857
colorado beetle (*Leptinotarsa decemlineata*), 2864x
fruitworm or corn earworm (*Heliothis armigera*), 1827, 1829
green vegetable bug (*Nezara viridula*), 1827
leaf miner (*Liriomyza* spp.), 1828, 3846
mites, russet (*Phyllocoptes* (*Vasates*) spp.), 3845
mites, spider (*Tetranychus* spp.), 2865r
nematodes, 550, 732s, 2618, 2856, 2866n
potato tuber worm (*Gnorimoschema operculella*), 1827
Sciara modesta, 3847
physiology—*see also above*, growth—
enzyme activity, 2370, 2372, 3819, 3827
light responses, 701, 705-707, 1280, 1804, 1805, 2370, 2372, 2838, 2839, 2865b, 3223, 3823-3829
respiration, fruit, 708, 2377, 3819
temperature responses, 700, 701, 2843, 2848, 3251, 3822-3824, 4048
tissue culture, 1340, 2866n
translocation, 1812, 2803, 3273, 3834
transpiration, 45, 702, 2354
water relations, 703, 704, 719, 1352, 3284
planting—
spacing, 709, 3218
transplanting *vs* direct sowing, 709
transplanting, treatments to facilitate, 3831
pollen storage, 1422
pollination, artificial methods, 2865g
polyploidy induced—*see also above*, breeding—696
pruning, 710, 711, 1256
ring culture, 1808
rogues—*see above*, mutants
root(s)—
composition, 3315g
culture of excised—*see above under* physiology, tissue culture
growth, 699, 1818, 3223, 3821
as a rootstock for tobacco, 773
rootstocks—
cucurbits, 2835
Cyphomandra sp., 601
Solanum spp., 732g, 2864f
seed—
germination, 536, 537, 2836, 3298
size, 2836, 3818
storage, 1684, 1823
treatments, 1685, 1686, 1823, 2837, 3897
seedlings—*see also above*, planting—
chilling, 3822
pots or blocks for—*see also above*, ring culture—541

Tomato—seedlings (*continued*)—
raising of, 2743, 2837, 3703
soil—
amendments and conditioners, 1256
conductivity, 3836
management—
fumigation or sterilization, 725, 726, 1256, 3842
irrigation, 719, 720, 1815-1817, 2747, 2847, 2852, 3223
leaching, 1814
mulching, 1256, 1667, 1814
rotations, 542
weed control—*see also above*, herbicide—488, 489, 510-514, 1667, 2718, 2722, 3676, 3677, 3679, 3680
pH, 1814
salt concentration in glasshouses, 1813, 1814
survey in New Zealand, 1256
temperature, 2848
water—*see above*, physiology
waterlogging and flooding, 1818
soilless culture, 2840
sprays—*see also above*, herbicide—
compatibility, 732o
fungicides, 2851
residues, 733g, 1701, 2857, 2864y, 2866j
staking, 2865z, 3856p
storage—*see also above*, fruit ripening—temperatures, 1833, 3848
tree (*Cyphomandra* sp.), 601
variety(ies)—*see also above*, hybrids—
in Argentina, 692
in Asia, 1269
in Canada, 4285
disease resistant, 1800, 1837o, 2833, 3228
in European countries, 525, 532, 2864b, 2864s, 2865v, 2866a
Fidelity, 1800
in Great Britain, 3695
Grosse Lisse, 1837i
Manalee, 1837o
in North Africa, 2833, 2834
for pre-packaging, 530
for processing, 693, 694, 4283
San Marzano, 1801
in South Africa, 3221
taxonomy and descriptions, 698, 3856m
in the U.S.A., 732t, 1267, 1802, 3839
in the U.S.S.R., 693
Vagabond, 3228
Victor, 695
Tools—*see also* Apparatus *and* Machines—for emasculating flowers, 260 l
Tools for tapping rubber, 2238
Torymus druparum, 1602
Toxins, pathogen-produced, 786, 802v, 2752, 2854, 2896
Toxins, plant reaction to, 1820, 2752
Toxoptera aurantii, 1235e, 4080
Trade—*see also* Agricultural statistics—
crops—
fibres, 828
Trade—crops (*continued*)—
fruits and nuts, 117y, 979, 1293, 1376, 2148f, 2148g, 2148t, 2148u, 2306j, 2535, 4128i
plantation—*see also* Cacao production and trade—1069, 1142, 4254p
spices, 865v
sugar, 1191, 3191x
tobacco—*see* Tobacco production and trade
vegetables, 117y
fats and oils, 1263
Tradescantia spp., cytology, 1345
Tradescantia spp., light responses, 31
Training—*see also* Pruning *and individual plants*—fruit trees, a book on, 3207
Translocation—*see also separate plants under* physiology—losses, growth stage affects, 2223
Transpiration—*see also separate plants under* physiology—
evapo-, 115, 2352, 3434
factors affecting, 385, 702, 2223, 2354, 2415d, 3369, 4063, 4064
measurement of, 115, 3308
sprays to reduce, 1100
Transplanting—*see under* Planting
Transport—*see also* Marketing *and* Packing—of fruit and vegetables, 685, 1029, 1068j, 1086, 1173, 2159, 3303, 4286
Transport, trucks, straddle, 1450
Trees and shrubs—*see also* Fruit trees *and individual species*—
a book on, 2307
climate, phenological data, 2958
for coastal districts, 974e
decay in, methods of determining, 2668
defoliation, chemical, 4012
destruction by explosives, 117k
destruction by herbicides, etc.—*see also* Hevea, tree poisoning—464-470, 523k, 1641, 1649, 1651, 1656, 1657, 2737f, 2737j, 2737o, 2737p, 3606-3609, 3619, 3648, 3693j
a dictionary of cultivated, 3193
diseases, 948, 949
flower forcing—*see* Forcing ornamentals
growing in containers, 2031
height measurement, 3314
for highways, 2030
for landscape planting, 3041v
Nursery exp. Stat., Boskoop, Yearb., 3943
pests, 879, 2054d, 4013
propagation, 872, 873
seed longevity, 3041 l
for shading gardens and houses, 942
silver-leaved, 974e
for small gardens, 3041y
soil pH requirements, 4011
transplanting large, 3042p
variety evaluation, 974s
in various countries, 941, 1956, 2029, 2030, 4268
Tree-tomato (*Cyphomandra betacea*) as a rootstock for tomato, 601

Trewia nudiflora, 2948t
Trials—*see under* Statistical
Tribulus cistoides, 1658
Trichoderma lignorum, 445g
Trichoderma spp., unspecified, 2753
Trichoplusia ni, 1714
Trifolium subterraneum, 311
Trillium spp., ornamental, 1956
Trinidad and Tobago—
crops, plantation, 2305d
Dir. Agric., Administ. A.R., 1278
imp. Coll. trop. Agric., A.R., 4294h
imp. Coll. trop. Agric., research at, 2149
plant quarantine, 2306v
Triploid plants—*see also* Polyploidy—3327
Tripolitania, crops, fruit, 1262
Tritonia crocosmaeflora, 1996
Tropaeolum—*see* Nasturtium
Tropics(al)—
agriculture, labour conditions in, 1069
crops, fruit, packing, 1077
ornamentals, foliage, 866
Products Dep., Amsterdam, A.R., 1277
roy. Inst. for the, Amsterdam, A.R., 1285o
Tropinota hirta, 3769
Tulip—*see also* Bulbs—
bulb—
composition, 2973, 2996
disinfection, 923
growth, 2012
storage, 2011, 3987
diseases, fungus, 923
diseases, virus, 924, 974j, 4030p
flowers, packing and storage, 2014, 3989
forcing, 870, 915, 2011, 2949, 3986, 3987
growth—
abnormal, 2013
insecticides affect, 3988
measurement, varietal differences and forcing capacity related, 3986
X-ray treatment of bulb affects, 2053u, 2053v, 3042f
history, 974j
pests, insect, 1997
planting, machines for, 1994
pollen development, X-rays affect, 2053u, 2053v, 3042f
soil management, weed control, 3600, 3633-3635
species collection, 2008
varieties, 1280
Year Book, R.H.S., 2008
Tung (*Aleurites fordii* and *A. montana*)—*see also Aleurites*—
climate, frost resistance, 2146
climate, rainfall, 1064
composition, leaf, 1065, 1066, 2146
fruiting, biennial, 1064
nutrition, major elements, 1065, 1066, 2145, 2146
nutrition, minor elements, 1065, 2145, 2146, 2148i
oil—
analysis, 1067, 1068q, 1954s, 2147
Tung—oil (*continued*)—
production and trade, 1263
yields, 1066
Tunisia, crops, 732x
Turbinaria conoides, 1944
Turkey, crops, 351, 802d
Turmeric (*Curcuma longa*), 3939o
Turnip—
composition, leaf, 545, 2765-2767, 3798
diseases, virus, 732j, 3726
greens—*see also above*, composition—spray residues, 1701, 2864y
growing in the tropics, 2864w
nutrition, 675
nutritional value, factors affecting, 544
pests, sawfly (*Athalia colibri*), 2864h
quality, growth substances affect, 676
soil management, irrigation, 3798
weed control, 3651
Turrialba, Inter-American Cacao Center, work at, 2165
Tylenchorhynchus claytoni, 799, 2897, 2898
Tyloderma fragariae, 408
Typha spp., control, 451, 2737i, 3615
Typhlocyba pomaria, 1621
Typhlodromus spp., unspecified, 3148
Typhlodromus tiliae, 1586, 1591
Tyrophagus castellanii, 3148

Uganda Dep. Agric., A.R., 4291
Ulex spp.—*see also* Gorse—control, 3683
Ultraviolet light—*see* Light
Ulva pertusa, 1954p
Umbelliferae, fruit anatomy, 4294j
Unaspis yanonensis, 1015, 1022
Uncinula necator—*see* Vine diseases, fungus, powdery mildew
United States—*see also individual States for reports*—
agricultural statistics, 2334, 3321
crops—
fruit—
deciduous tree—*see also* Apple *and* Peach—260j, 1387, 1393, 2503d, 3319, 3321, 3325, 3331
evergreen, 3325
small—*see also* Blueberry, Strawberry *and* Vine—125, 260j, 1393, 3319, 3325
nuts, 1393, 2148n, 3319, 3325
ornamentals, 974d, 1957, 1958, 2053m, 2053s, 3041e, 3041i, 3042r, 4031n
various, 856, 3892a, 3927, 3939y, 3940a
vegetables, 732c, 732k, 732t, 1677, 1678, 2866b, 3855b, 3855f, 3855s, 3855t, 3856t
Dep. Agric., agric. Res. Center, Beltsville, Md, 1286
horticultural economics, 1957, 1958
plant breeding, 529
plant introduction service, 1290, 3235
Yearbooks of Agriculture, 3231, 3232
Urea—
biuret an impurity in, 712, 1000, 2082, 3384
foliage sprays, 211, 976, 999, 1750, 2591, 2844, 2864n, 3384

Urea (*continued*)—
-formaldehyde (Uramite) as a fertilizer, 1084, 1966, 3942, 3956
Uromyces phaseolorum, 2330
Urtica, spp., control, 493, 1669
U.S.S.R.—
crops—
deciduous fruit trees, 260m
evergreen fruit and plantation, 1235 l
ornamentals, 4266, 4268
small fruits, 326r
vegetables, 588, 2865i
plant breeding, 126, 127
Ustilago scitaminea, 1215

Vaccinium—*see also* Blueberry—*myrtillus*, 3421
Valsa eugeniae, 1231
Vanilla—
diseases, 812
embryo development, 2911
growing in various countries, 3939a
research in the Belgian Congo, 1265
seed germination, 811
Vapour-heat treatment of fruits, 3154
Variegation—*see also separate plants*—biochemical aspects, 947
Variegation, genetical aspects, 4163
Variety(ies)—
collection(s)—
deciduous fruits, 1468f, 1510g
evergreen fruits, 2148r
general, in the U.S.A., 3235
ornamentals, 3015, 3945
description, methods, 885, 930, 1400
register, in Spain, 3236
Vegetables—*see also separate crops*—
breeding and selection, 528, 2420, 2738
composition, nutritional value, 1837v, 3263, 3698, 4294c
composition, vitamins, 1702, 3855q
diseases—
damping off, 2753
general, 1696, 1697, 2865o, 3855p, 3856o
non-parasitic, 3316g
growing—
books on, 527, 1253, 1787, 4261
under cloches, 540
under glass, 1787
at high altitudes, 3696
labour efficiency and requirements, 3855y, 4292
in various countries—*see under individual countries*
marketing in various countries, 118k, 3231
marrow—*see* Marrow
nutrition—
foliar, 1750
manuring, 528, 732u, 1468i
minor elements, 1693, 2746, 2747, 3201, 3708
sewage, 3709
Orobanche susceptibility, 456
packing and grading, 117j, 530, 2759, 3810
pests, control, general, 3856o
Vegetables (*continued*)—
pests, insects, 547, 1696, 1697, 2865o, 3856h
production and trade, 117y
research, field bins for, 539
research, in various countries, 528, 3699
seed—*see also under* Seed—disinfection, 535, 1696, 1697
seed storage, 2395
seedlings, raising, 543
soil management—
irrigation, 87, 733c, 2864v, 3316i
mulching—*see* Mulching
rotations, 2740
weed control, 447, 490-495, 1665, 1666, 1675a, 2703, 2704, 2737a, 3650, 3651, 3856o
sprays, insecticides, 547
sprays, residues, 732v, 2864 l, 2865h
storage—*see* Storage
texture, factors affecting, 1703
transport, 1068j
varieties—
conference report on, 2864g
disease and pest resistant, 3855s
in the tropics, 3697
washing, 733g, 1788
Venezuela, crops, 3697, 3856o
Venezuela, Shell Serv. for the Fmr, A.R., 4289
Veratrum—
album, 3916
fimbriatum, 3900
spp., propagation and trials, 3899
Verbascum thapsus, 1324
Verbascum virgatum, 822
Verbena breeding and selection, 2981
Vermiculite, horticultural uses, 1792, 3990
Veronica spp., weed control, 487
Verticillium—
albo-atrum, 2148y, 2603, 2604, 2931, 2978, 3018
cinerescens—*see Phialophora*
dahliae, 2603, 2978
nigrescens, 2978
nubilum, 2978
spp., unspecified, 392, 582, 1514, 2671g, 3532, 3931
tricorpus, 2978
Vesperus xatarti, 2638
Viburnum spp., as fruit plants, 125
Viburnum spp., pests, 2962
Vicia faba—*see* Beans (*Vicia*)
Vicia villosa, 2908j
Victoria—*see under* Australia
Victoria regia, 3955
Vigna sesquipedalis, 2387
Vigna sinensis, 595, 617, 3136
Vinca rosea, 38, 974 l, 2920
Vine—*see also Vitis, and for subjects relating to grapes see below, under* fruit—
breeding, 3439
climate—
air pollution, 1639, 3246
drought resistance, 2572
micro-, 291, 2343, 3480, 4125

Vine—climate (*continued*)—
spring frost injury or protection, 3480, 3486
winter injury, hardiness and protection, 3442, 3476
composition—
bunch stalk, 307
fruit and must, 313, 326b, 1510p, 2548
leaf and petiole, 304, 305, 307, 1501, 2548, 3452, 3453
root, 307
seed, 3456j
shoot, 69, 307
diseases—*see also below*, spray—
fungus—
anthracnose or black spot (*Elsinoë ampelina*), 1569
Armillaria mellea, 445g
downy mildew (*Plasmopara viticola*), 393, 394, 1569-1572, 2028, 2612, 2613, 2660, 2662, 3504, 3508, 3535, 3536, 3578, 3581
excoriosis (*Phoma flaccida*), 2607
grey mould (*Botrytis cinerea*), 1574
powdery mildew or oidium (*Uncinula necator*), 1569, 1570, 2609, 2610, 2613, 2614, 3536, 3597f
Rosellinia necatrix, 3464
white rot (*Coniothyrium diplodiella*), 1573, 2612
non-parasitic, chlorosis, 2540
non-parasitic, nutritional, a book on, 1249
in the U.S.A., 1255
virus—
infectious degeneration, court-noué or fan leaf, 1551, 1552, 2583, 2670p
white emperor, 2584
yellow vein, 2670o
dodder control, 3623
flower—
biology and morphology, 1488, 3448
bud forcing to forecast flower production, 1491, 3443
bud initiation and development, 294
or fruit drop, 296
or fruit thinning—*see also below*, fruit bunch—3451
fruit (grapes)—
bunch thinning, 1498
composition—*see above*, composition, *and below under* fruit quality
packing, 2553, 2558u
picking, mechanical aids, 3455
production and trade, world, 2535
quality, factors affecting, 305, 1495, 1498, 1501, 2536
residues, utilization, 310, 1504
ripening—
growth substances affect, 302, 303, 3450
hastening, methods of, 300
maturity tests, 313, 3441
set, treatments affecting, 1499, 3450
size—
growth substances increase, 301, 3450
Vine—fruit (grapes)—size (*continued*)—
nutrition affects, 307
seed number affects, 326n
storage, 237, 1503
thinning—*see above*, flower *and* fruit bunch
yields—
bud position affects, 1495
forecasting, 294, 1491
soil porosity affects, 305
girdling—*see below*, ringing
growing in—
Great Britain, 1242, 1377, 1489, 2558f
Italy, 1484, 1510a, 1510b, 1510h, 3456f
Turkey, 284
the U.S.A., 1483
growth—
bud burst, 295
dormancy, 2558q, 3442
fungicides affect, 3579
root, 293, 1267
substance responses, 302, 1499
shoot, 1495
wood maturity, 2545
herbicide injuries, 2678, 3624
leaf—
autumn colouring and browning, 336
composition—*see above*, composition
moisture-retaining capacity, 2572
mutations, 2558c
nutrition—*see also above*, composition, *and below*, soil management—
boron, 1640b, 2549, 2560, 3463, 3464
calcium, 2540
chromium, 308
disorders of, a book on, 1249
foliar, 308, 311, 336, 1500, 2549
magnesium, 336
manganese, 2549, 3460
manuring, 304, 306, 307, 310, 326a, 2547, 2548, 2550, 3454
molybdenum, 3470
nitrogen, 2549
phosphorus, 2549
potassium, 307, 1500, 2434, 2549, 3453
zinc, 3460, 3474
pests—*see also below*, spray—
Antispila rivillei, 3598i
birds, 1617
in Brazil, 1699
cane girdler (*Ampeloglypter ater*), 3547
Cryptoblabes gnidella, 3562
mealybugs (*Pseudococcus* and other spp.), 1598, 2644
mites (several species), 1590-1592, 2628, 2670v
nematodes, 2618
noctuids, 3557
Phalaenoides glycine, 1640t
phylloxera, 286, 411-414, 1597, 2634, 2670w, 3464, 4276
Sterrhopteryx hirsutella, 423
Vesperus xatarti, 2638
weevil (*Otiorrhynchus sulcatus*), 2637, 3551

Vine—pests (*continued*)—
western grape skeletonizer (*Harrisina brillians*), 445v
white grub, 445j
physiology—
protoplasmic changes during dormancy, 3442
temperature responses, 2539
water relations, 292, 326p
planting—
contour, 326a
depth, 2543
methods, 2543
spacing, 2544, 3445
pollination, artificial, 2546
pollination, normal, 2558d, 3449
propagation—*see also below*, rootstocks—
by cuttings—
methods, 1493, 2538
physiological aspects, 69, 2434
root development, 2537
by grafting—
budwood for, 1492
on cuttings (bench-grafting), 288, 290
methods, general, 288, 3444
soil heating for, 289, 2539
pruning—*see also below*, training—methods, 296-298, 1496, 1497, 1510n, 2544, 3446, 3447, 3456n
prunings, utilization, 310, 1504
research—
in North Africa, 3208
plot size required for, 1490
in various European countries, 1378, 1485, 4276
ringing, 300, 1499, 3451
roots—
composition, 307
growth, 293, 1267
pruning, 2552
rootstocks—*see also above*, propagation—
phylloxera-resistant, 286
-scion relationships, 285, 287, 1494, 2536
in various European countries, 2541, 2542, 2558i, 3456e
seed composition and structire, 3456j
shoot—*see also above*, composition, growth *and* prunings—anatomy, 2545
soil—
amendments, 2550
conservation, 3390
management—
cover crops, green manure, 311, 312, 3474
cover crops, permanent, 309
cultivation methods, 2552, 3388
drainage, 220
fumigation, 411, 412, 414
irrigation, 87, 326j, 733c, 2552
mulching, 1501, 2539, 2551
weed control—*see also above*, herbicide—309, 471, 473, 2690, 2693, 2694
sickness, 312, 3474
waterlogging, 3490
Vine (*continued*)—
spray—
injuries, 3579
programmes, 2671v, 3597o
residues, 2666
training—*see also above*, pruning—1498, 2558r, 3456n
trellising, 299, 1269, 2536
variety(ies)—
Anna Maria, 2558s, 3456o
Black Alicante, 287
Chasselas, 1510c
classification and identification, 326o, 1510d, 3440, 3456 l
collections, 1510g
hybrid direct producers, 326t
Lake Emerald, 1510q
Montepulciano, 1510e
Nuragus, 3456b
Pergolone, 1510j
Pinella, 1510i
sultana, 284, 294, 295
in various countries—
European, 326 l, 1487, 1489, 2558a, 2558i, 3409, 3456e
North African, 1486
North American, 2503r, 2558o
Verdicchio bianco, 3456a
wood maturity, 2545
Vineland hort. Exp. Stat., Ont., bienn. Rep., 3228
Viola (including pansy)—
diseases, 2975, 3516
flower pigments, 3976
seed germination, 2955
varieties, 897
weed control, 1654, 2950
Violet pests, insect, 1992
Virginia—*see* West Virginia
Virola spp., snuff from, 1954y
Virology, a new periodical, 2335
Virus(es)—*see also hosts*—
concentration, host's nutrition affects, 1885, 1886
control, inactivation or reduction by—
antisera, 3042n
composting, 1889
chemicals, 1540, 1785, 1823, 1887, 2893, 3808
growth substances, 3714, 3808
heat—*see also* Sugar-cane setts, treatment—1888, 2574, 2671n, 2969, 3589
irradiation, 2908f, 2908r
plant extracts—*see also below*, inhibitors—1889
propagation from tip cuttings, 877, 2574
detection by various methods, 355, 902, 1552
diseases of fruit trees, a symposium on, 3491
diseases of rootstock-scion combinations in citrus—*see under* Citrus, diseases, virus
-free fruit clones, selection and maintenance, 270, 354, 359, 1537, 2573, 2671n, 4288
-free seed of vegetable crops, 2830

Virus(es) (*continued*)—
host—
reactions, physiological, 1546, 1870, 2850, 2864i, 3880
reactions, symptom expression variations, 3879
susceptibility, factors affecting, 1884, 3764, 3765
indicator plants—*see also Fragaria* spp.—733j, 2576
inhibitors in plants or seeds, 621
interference phenomena, 2578
multiplication, temperature affects, 3879
research, a book on advances in, 2319
reviews and surveys, 3491, 3597d, 3597t, 3598n
spread, plant barriers reduce, 565, 2861, 3700, 3726
spread, weeds' role in, 523 l
strains, interactions, 1117
transmission—*see also above*, spread, *and below*, vectors—
by dodder, 965, 3841
by seeds, 1795, 1823, 2908g, 3082
in soil, 924
vectors—
aphids—*see* Aphids
insects, general, 1640p
leafhoppers—*see* Leafhoppers
mealy bugs—*see* Cacao diseases, virus, vectors
mites, 1547
Vitamin(s)—
A—*see also* Pigments, carotenoids—content, factors affecting, 2766, 2823
A extraction, 3790
B (complex) content, of seaweeds, 1954 l
B (complex), plant responses to applied, 1305, 1493, 2391, 3260
C—
biosynthesis, 3262
content—
factors affecting, 706, 716, 760, 1061, 1867, 2458, 2521, 2529, 3058, 3059, 3722, 3723, 3781, 3829
of fruits and nuts, deciduous tree—*see also* Apple *under* composition—33, 1061, 1509, 1837j, 3392
of fruits, small, 263, 264, 2505, 2521, 2529, 3392
of fruits, tropical and subtropical—*see also* Citrus *and* Guava *under* composition—2299, 3187-3189, 3191r, 3191s, 3191u, 4178, 4252. 4253
of various plants, 760, 780, 3034
of vegetables, leafy, 263, 2866t, 3716, 3855q
of vegetables, non-leafy—*see also* Tomato composition—263, 1702, 1837j, 3765, 3855q
determination, 2126
extraction, 3188
oxidation, methods of retarding, 1232
plant responses to applied, 3261, 3765
general, in fruits and vegetables, 819, 2304
Vitis—
labrusca, 326p
silvestris, 326q
spp., phylogenetics, 3438
Voles—*see under* Rodents
Vriesia splendens, 1960, 2022

Wageningen, Centre for Agricultural Documentation, 6
Waite agric. Res. Inst., South Australia, A.R., 1285t
Wales—*see under* Great Britain
Wallflower diseases, 1993
Walnut—
climate, frost injury to kernel, 3481
climate, winter injury and hardiness, 3476
composition, kernel—*see below*, kernels
composition, plant, 33
diseases—
bacterial, 1555, 2589, 3499
fungus, 1576, 1577, 2616, 3534, 3537
non-parasitic, 2564
flower development, 323
flower and fruit abnormalities, 324
growing in various countries, 326i, 326s, 1509, 1510r, 3456d
growth data, 3456p
kernels—*see also below*, seed—
frost injury, 3481
nutritive value, 1509
oil, 750, 1954r
nutrition, nitrogen, 2616
pests, insects, 422, 1595, 1613, 2632, 2633, 2647, 2651, 3550, 3556
pests, mites, 2633, 3544
physiology, photosynthesis, 39
products, syrup, 1509
propagation, by cuttings, 3340
propagation, from seed, 325
rootstocks, 1577, 2564, 3537, 4276
seed germination, 2557
soil management, irrigation, 2616
spray residues, 1631
varieties, 1393
Waltheria americana, 815
Washing—
cacao beans, 2191, 2192
seeds and tissues, 1372
vegetables, 733g, 1788
Water—*see also* Climate, Drought, Flooding *and* Irrigation—
absorption by roots, factors affecting, 1863, 1864, 2379
absorption during seed germination, 2396
in agriculture, U.S.D.A. Yearbook on, 3232
content of hop cones, measurement of, 842
culture—*see* Soilless culture
exudation by roots—*see* Roots
losses from plants, shade effects, 1978
movement in plants, 46, 117d, 1374 l
plants, a book on, 3204
relations of plants—*see also* Transpiration *and separate plants under* physiology *and/or* soil—

Water—relations (*continued*)—
boron affects, 3284
bromeliads, 2022
deciduous fruits and nuts—*see also* Apple, Pear *and* Vine—314
diseases affect, 787, 788
evergreen fruit and plantation—*see also* Citrus *and* Sugar-cane—1005, 1052, 2180, 4167
ornamentals, 1978
osmotic movement in relation to, 1337
reviews on, 85, 1375c
tobacco—*see* Tobacco
vegetables—*see also* Beans (*Phaseolus*) *and* Tomato—660, 719
thermal, for glasshouse heating, 3315u
thermal, for water plants, 3955
Watercress beds, water pollution, 1797
Watercress growing, methods, 733d
Water-hyacinth control, 1647, 1675e, 3614
Water-hyacinth as an ornamental, 3955
Watering pot plants, chilling injury caused by, 1970
Watering pot plants, methods, 3954
Water-melon—*see also Citrullus*—
breeding, 587, 588
composition, 263
diseases, 1731, 4132
growing in Argentina, 1726
hybrid vigour, 587
maturity tests, 3749
physiology, 3736
seed germination, 537, 3736
seed production, 587
spray injury, 3748
as tomato rootstock, 2835
varieties, 588, 1727
Wattle (*Acacia* spp.)—
nutrition, 3234t
pests, 3224, 3932, 3939h
Res. Inst., Pietermaritzburg, A.R., 1951
Wax(es)—
flower, composition of, 1954o
leaf, chemistry of, 2948o
sources, various plants, 3936
Weather—*see* Climate, Frost, Hail, Meteorology, Sun *and* Wind
Weed(s)—
air pollution indicated by, 26
competition—
assessment, 3655
crop responses, 2737u
economic aspects, 3599
physiological aspects, 3601
control—
in crops—*for separate crops see each under* soil management *or* weed—
ornamentals—
bulbs, etc.—*see* Bulbs, Gladiolus *and* Narcissus
herbaceous, 447, 474, 515, 1654, 2974, 3638
trees and shrubs, 447, 475, 1654, 1655, 3016, 3639
various, 2737a, 2950
perennial tropical and subtropical fruit and plantation crops—*see also* Sugar-cane *and* Tea—448, 2722-2724, 3136
small fruits—*see also* Cranberry, Strawberry *and* Vine—447, 471, 1650, 2417, 3600, 3619
temperate tree fruits—*see also* Apple—447, 448, 1650, 2690, 2691, 3600
various—*see also* Tobacco—2676, 2938
vegetables—*see also* Asparagus, Bean (*Phaseolus*), Beetroot, Carrot, Cucumber, Cucurbits, Onion, Pea, Spinach *and* Tomato—
cruciferous, 2707, 2709, 2730
general or unspecified—*see* Vegetables
various individual, 500, 501, 505, 510, 2678, 2716, 2719, 3658, 3675
methods—
biological, 456, 1645, 1648, 3682, 3683
chemical—*see* Herbicides
mulching, 1667
mechanical, 448, 522, 1235h, 1643, 1660, 2683, 2684, 2725, 2736, 3204, 3671, 3692
soil fumigation—*see under* Fumigation, soil
various, 1664, 2737b
of particular types—*see also individual weed species*—
annual and biennial, 447, 450, 453, 497, 1641, 2690, 2737q, 3633-3637
aquatic, 447, 460, 461, 463, 523g, 1641, 1647, 1675e, 2688, 2689, 2737i, 3204, 3611-3615, 3693c
grasses and sedges—*see also Agropyron repens*, Crabgrass, *Cyperus* spp. *and Sorghum halepense*—458, 491, 1217, 1643, 1658, 1660, 2700, 2724, 2725, 2732, 2737h, 3634, 3642, 3647, 3657, 3693a, 3693k
perennial herbaceous, 447, 451, 1641, 2677, 2690, 3657
perennial woody—*see* Trees and shrubs, destruction
reviews on, 447, 2677, 3603
in specific areas—
canal and ditch banks, 462, 2737c
compost heaps, 516, 3632
lawns—*see* Lawn management
nurseries, 474, 1655, 2695, 2696, 3222, 3640-3643
railways, 2737s
road verges, 447, 466, 1659
seed-beds, 1851, 2720, 2721, 2900, 3632, 3639, 3681
shelterbelts, 2697
in various countries—
Canada, 1641, 2675, 3682, 3693m
European and Mediterranean, 523r
New Zealand, 3603
tropical and subtropical, 476, 3599

Weeds—control—in various countries (*continued*)—
the U.S.A., 2737a
research, basic, 446
Research Inst. Danish, A.R., 2737t
of various countries, 1675f, 2672-2674
Weigela—see Diervilla
Wellesbourne, nat. Veg. Res. Stat., A.R., 4293
West—
African—*see also separate countries*—Cocoa Res. Inst., Tafo, A.R. and work at, 2163, 2164
African Inst. Oil Palm Res., A.R., 3149
Bengal, Dir. Agric., A.R., 1279
Indies, peasant agriculture, 3191o
of Scotland agric. Coll., A.R., 1280
Virginia agric. Exp. Stat., A.R., 1281
White grub control, 445j, 2636
Whortleberry (*Vaccinium myrtillus*), 3421
Wilhelminadorp Exp. Stat. Fruit-Growing in the Open, A.R., 1379
Wilting, percentage of soil, 1352
Wilting toxins—*see under* Toxins, pathogen-produced
Wind, crop responses and damage, 3877, 4224
Windbreaks—
for crops, herbaceous, 534
for crops, trees and shrubs, 1380, 1381, 1526, 1527, 2225
microclimatic effects, 21, 23, 2415h, 4125
permeable *vs.* solid, 2344
trees and plants—
Callitris spp., 950
Casuarina spp., 2225
conifers, 2416f
Cupressus spp., 950, 2346
hedges, 1527
Pinus spp., 950
Sesbania aegyptiaca, 2346
in various countries—
Australasian, 20, 950
European and Mediterranean, 118e, 118f, 2346
tropical, 4254w
the U.S.A., 2345, 2416f
weed control in, 2697
Wireworm control, 1700, 3886
Withania somnifera, 2948n
Wood preservatives, 1464, 1639, 3408d
Wood shavings as soil amendment, 2349
Woody plants—*see* Trees and shrubs
Wound dressings for trees and shrubs, 182, 3227
Wounds on fruit, tetrazolium to detect, 3098, 4108
Wrightia pubescens, 851

Xanthium spp.—
growth substance responses, 1341
photoperiodic responses, 1325, 3255
as weeds, and their control, 3688
Xanthomonas—
albilineans, 1213
juglandis, 1555, 3499
Xanthomonas (*continued*)—
phaseoli, 47, 623, 2755
pruni, 2587, 2588, 3498, 4285
vesicatoria, 721, 729, 1824, 2862, 2863
Xanthosoma brasiliense, 3854
Xiphinema sp. on deciduous fruit trees, 396
Xyleborus dispar, 2639
Xyleborus morstatti, 1115
X-rays—
chromosome responses, 1344, 1345
plant responses—
anthesis advanced by, 1996
disease resistance affected by, 2866k
rejuvenation induced by, 4020
treatment of bulbs and tubers, 1775, 1996, 2053u, 2053v, 3042f
use in—
breeding, 130, 131, 3754, 4165
determining decay in living trees, 2668
physiological studies, 118i
plant radiography, 3312
virus inactivation by, 2908f
Xylaria mali, 2600

Yearbook(s)—
of Agriculture, U.S.D.A., 1954: *Marketing*, 3231
of Agriculture, U.S.D.A., 1955: *Water*, 3232
Amateur Gardening Annual, 3216
Amateur Gardening Diary, 4277
Annual Rev. Biochem., 4294 l
Commercial Grower Handbook and Diary, 2321
Daffodil and Tulip, roy. hort. Soc., 2008
Danish hort. Soc., 3209
Food Agric. Statistics, F.A.O., 1285e, 4274
Fruit Annual, 2333
Fruit, roy. hort. Soc., 1377
Lily, roy. hort. Soc., 2007
Plant Protection Serv., Wageningen, 2330
Rhododendron and Camellia, roy. hort. Soc., 2036
Rhododendron and evergreen woody plants, Rhododendron-Gesellschaft, Bremen, 4023
Yeasts in fruit, 1468j
Yemen, crops, 3192 l
Yew—*see Taxus*
Yields, perennial crop, variations in, 4168, 4181
Youngberry growing, 2558h
Yugoslavia—
agriculture, 1296
crops, fruits and nuts, 143, 1405, 1487
flora, 867

Zannichellia palustris, 2688
Zantedeschia spp.—
bulb storage, 2983
diseases, 904
temperature responses, 2983
Zanzibar, crops, 1234w
Zanzibar Dep. Agric., A.R., 1285v

Zenarge turneri, 1615
Zephyranthes candida, 1996
Zinc—*see also* Fungicides—
accumulation in soils, 2083
application, foliar, 3138
determination, 2146, 3315d
nutrition—
of crops—
evergreen fruit and plantation—*see also* Citrus nutrition—1112, 1203, 2206, 2207, 3136, 3138, 3159
fruit and nut trees, deciduous, 1520, 2146, 3460, 3471
small fruits, 3460, 3474
various, 1886, 1928
vegetables, 1690, 1812, 2795, 3760
disease resistance affected by, 3159
flower development affected by, 4059
Zinc (*continued*)—
interrelationships with other elements, 2145, 3137, 3138, 4054
radioactive, 1812, 3062, 3138
sources, chelates, 3136, 3471
virus multiplication affected by, 1886
Zingiber officinale—*see* Ginger
Zinnia—
cell ageing, 2982
diseases, 3947
potting composts, 2960
seed treatment, 3947
Zizyphus jujuba, 3122
Zizyphus sativa, 3119r
Zonocerus variegatus, 3123
Zürich-Oerlikon, landw. Versuchsanst., 1285w
Zwetsche—*see* Damson
Zythia spp., unspecified, 3597w

List of periodicals and of a few occasional publications examined in the compilation of Horticultural Abstracts, Vol. 26, 1956.

In addition to the publications cited here very numerous occasional publications issued separately by Ministries, Departments, Research Stations and others were also examined. It has been thought inexpedient to attempt their full and accurate citation here.

Abstracts of Scientific and Technical papers published in Egypt and papers received from Afghanistan, Cyprus, Iran, Iraq, Lebanon, Pakistan, Sudan, and Syria, Cairo
Acta Agriculturae Scandinavica, Stockholm [*Acta Agric. Scand.*]
Acta Agronomica, Palmira, Colombia [*Acta agron. Palmira*]
Acta Agronomica Academiae Scientiarum Hungaricae, Budapest [*Acta agron. hung.*]
Acta Entomologica Fennica, Helsinki [*Acta ent. fenn.*]
Acta Horti Gothoburgensis, Göteborg [*Acta Hort. gothoburg*]
Acta tropica, Basel [*Acta trop., Basel*]
Acta Universitatis Agriculturae et Silviculturae, Brno, Czechoslovakia [*Acta Univ. Agric. Silvic., Brno*]
Administration Report Ceylon Director of Agriculture, Colombo [*Adm. Rep. Dir. Agric. Ceylon*]
Administration Report of the Director of Agriculture, Trinidad and Tobago, Port of Spain [*Adm. Rep. Dir. Agric. Trinidad*]
Advances in Agronomy, New York [*Advanc. Agron.*]
Advances in Virus Research, New York [*Advanc. Virus Res.*]
Agrártudományi Egyetem Kert- és Szőlőgazdaságtudományi Kar Évkönyve, Budapest [*Agrártud. Egy.*]
Agri hortique genetica, Weibullsholm, Sweden [*Agri hort. genet.*]
Agricultor Venezolano, Caracas, Venezuela [*Agric. venezol.*]
Agricoltura delle Venezie, Venice [*Agric. Venezie*]
Agricultura Técnica, Santiago, Chile [*Agric. téc. Chile*]
Agricultura Tropical, Bogotá, Colombia [*Agric. trop. Bogotá*]
Agricultural Engineering, St. Joseph, Michigan [*Agric. Engng St. Joseph, Mich.*]
Agricultural Gazette of New South Wales, Sydney [*Agric. Gaz. N.S.W.*]
Agricultural and Horticultural Engineering Abstracts, Silsoe [*Agric. hort. Engng Abstr.*]
Agricultural Institute Review, Ottawa [*Agric. Inst. Rev.*]
Agricultural Journal Department of Agriculture, Suva, Fiji [*Agric. J. Dep. Agric. Fiji*]
Agricultural Literature References to Boron and Minor Elements, issued quarterly by Borax Consolidated Ltd., London [*Agric. Lit. Refs Boron*]
Agricultural Newsletter, Wilmington, Delaware [*Agric. Newsl.*]
Agricultural Research, Washington, D.C. [*Agric. Res. Wash.*]
Agricultural Review, London [*Agric. Rev. Lond.*]
Agricultural Statistics, Edinburgh [*Agric. Statist., Scot.*]
Agricultural Statistics, London [*Agric. Statist., Lond.*]
Agricultural Statistics, U.S. Department of Agriculture, Washington, D.C. [*Agric. Statist., U.S.*]
Agriculture. Journal of the Ministry of Agriculture, London [*Agriculture, Lond.*]
Agriculture. Revue Trimestrielle de la Corporation des Agronomes de la Province de Québec, Canada [*Agriculture, Québec*]
Agriculture and Horticulture, Tokyo [*Agric. Hort. Tokyo*]
Agriculture Pakistan, Karachi [*Agric. Pakist.*]
Agrobiologija, Moscow [Russian] [*Agrobiologija*]
Agrokémia és Talajtan (Agrochemistry and Soil Science), Budapest [*Agrokém. Buda.*]
Agronomia Angolana, Luanda, Angola [*Agron. angol.*]
Agronomia Lusitana, Sacavem, Portugal [*Agron. lusit.*]
Agronomie Tropicale. Publication Mensuelle du Ministère des Colonies, Nogent-sur-Marne, France [*Agron. trop.*]
Agronomy Journal, Madison, Wis. [*Agron. J.*]
Amateur Gardening Annual, London [*Amat. Gdng Annu.*]
American Fruit Grower, Willoughby, Ohio [*Amer. Fruit Gr*]
American Journal of Botany, Lancaster, Pa [*Amer. J. Bot.*]
American Nurseryman, Chicago [*Amer. Nurserym.*]
American Statistician, Washington, D.C. [*Amer. Statistician*]
American Tomato Yearbook, New York [*Amer. Tomato Yearb.*]
American Vegetable Grower, Willoughby, Ohio [*Amer. Veg. Gr.*]
Anais da Escola Superior de Agricultura "Luiz de Queiroz" Piracicaba, São Paulo [*An. Esc. sup. Agric. Queiroz*]
Anais do Instituto Superior de Agronomia, Lisbon [*An. Inst. sup. Agron., Lisbon*]
Anales de Edafología y Fisiología Vegetal, Madrid [*An. Edafol. Fisiol. veg.*]
Anales de la Escuela de Peritos Agrícolas, Barcelona [*An. Esc. Perit. agríc. Barcelona*]
Anales de la Estacion Experimental de Aula Dei, Zaragoza, Spain [*An. Estac. exp. Aula Dei*]
Anales del Instituto de Biologia, Universidad de México, Casa del Lago [*An. Inst. Biol. Univ. Méx.*]
Anales del Instituto Botanico A. J. Cavanilles (Anales del Jardin Botanico de Madrid) [*An. Jard. bot. Madrid*]
Anales Instituto Nacional de Investigaciones Agronomicas, Madrid [*An. Inst. nac. Invest. agron. Madrid*]
Analyst, London [*Analyst*]
Analytica Chimica Acta, Amsterdam [*Analyt. chim. Acta*]
Analytical Abstracts, London [*Anal. Abstr.*]
Analytical Chemistry, Easton, Pa [*Analyt. Chem.*]
Angewandte Botanik, Berlin [*Angew. Bot.*]
Annales Academiae Scientiarum Fennicae Ser. A. IV. Biologica, and Ser. A. II. Chemica, Helsinki, *see* Suomalaisen Tiedeakademian Toimituksia
Annales Bogorienses, Bogor, Indonesia [*Ann. bogor.*]
Annales botanici Societatis Zoologicae-Botanicae Fennicae, *see* Suomalaisen Eläin- ja, *etc.*
Annales de l'École Nationale d'Agriculture de Montpellier, Montpellier [*Ann. Éc. Agric. Montpellier*]
Annales Entomologici Fennici, Helsinki, *see* Suomen Hyonteistieteellinen Aikakauskirja
Annales de Gembloux, Gembloux, Belgium [*Ann. Gembl.*]
Annales de l'Institut Agricole et des Services de Recherches et d'Experimentation Agricole de l'Algérie, Alger. [*Ann. Inst. agric. Algér.*]
Annales de l'Institut National Agronomique, Paris [*Ann. Inst. nat. agron.*]
Annales de l'Institut National de la Recherche Agronomique. Série A. Annales Agronomiques, Paris [*Ann. agron.*]
Annales de l'Institut National de la Recherche Agronomique. Série B. Annales de l'Amélioration des Plantes, Paris [*Ann. Amél. Plantes*]
Annales de l'Institut National de la Recherche Agronomique. Série C. Annales des Épiphyties, Paris [*Ann. Épiphyt.*]
Annales de l'Institut Phytopathologique Benaki, Athens [*Ann. Inst. phytopath. Benaki*]
Annales du Service Botanique et Agronomique de Tunisie, Tunis [*Ann. Serv. bot. agron. Tunis.*]
Annales de la Société Nationale d'Horticulture de France, Paris [*Ann. Soc. nat. Hort. Paris*]
Annales Universitatis Mariae Curie-Skłodowska, Section C and Section E, Lublin, Poland [*Ann. Univ. M. Curie-Skłodowska, Sect. C and Sect. E*]
Annali della Facoltà di Agraria, Perugia [*Ann. Fac. Agrar. Perugia*]
Annali della Facoltà di Scienze Agrarie della Università degli Studi di Napoli, Portici [*Ann. Fac. Sci. agrar. Univ. Napoli*]
Annali della Sperimentazione Agraria, Rome [*Ann. Sper. agrar.*]
Annals of Applied Biology, Cambridge [*Ann. appl. Biol.*]
Annals of Botany, London [*Ann. Bot. Lond.*]

Annals and Magazine of Natural History, London [*Ann. Mag. nat. Hist.*]
Annals of the Missouri Botanical Garden, St. Louis [*Ann. Mo. bot, Gdn*]
Annals of the Royal Agricultural College of Sweden, Uppsala (Kungl. Lantbrukshögskolans Annaler) [*Ann. roy. agric. Coll. Sweden*]
Annuaire agricole de la Suisse, *see* Landwirtschaftliches Jahrbuch der Schweiz
Annuaire de la Faculté d'Agronomie et de Sylviculture de l'Université de Skopje, Yugoslavia [*Annu. Fac. Agron. Sylvic. Skopje*]
Annuaire de l'Institut des Recherches Agronomiques-Skopje, Skopje, Yugoslavia [*Annu. Inst. Rech. agron. Skopje*]
Annual Administration Report of the Agricultural Department, Mysore, Bangalore [*Annu. Adm. Rep. agric. Dep. Mysore*]
Annual Blueberry Open House. Cranberry and Blueberry Research Laboratory, Pemberton, N.J. [*Annu. Blueberry Open House*]
Annual Booklet of the Association of Growers of the New Varieties of Hops [Secretary and Treasurer at Langley, near Maidstone] [*Annu. Bookl. Ass. Gr. New Hops*]
Annual Departmental Reports by the Director of Agriculture, Fisheries and Forestry, Hong Kong [*Annu. depl Rep. Dir. Agric. Hong Kong*]
Annual Report Aden Protectorate Department of Agriculture, Aden [*A.R. Aden Prot. Dep. Agric.*]
Annual Report Agricultural Research Institute of Northern Ireland, Hillsborough [*A.R. Hillsborough agric. Res. Inst.*]
Annual Report of the Agricultural Research Service, Ministry of Agriculture, Hashemite Kingdom of Jordan, Jerusalem [*A.R. agric. Res. Serv., Hashem. Kingd. Jordan*]
Annual Report Alberta Department of Agriculture, Edmonton [*A.R. Alberta Dep. Agric.*]
Annual Report of the Aomori Apple Experiment Station, Aomori, Japan [*A.R. Aomori Apple Exp. Stat.*]
Annual Report Arizona Agricultural Experiment Station, Tucson [*A.R. Ariz. agric. Exp. Stat.*]
Annual Report of the Australia Canned Fruit Board, Melbourne [*A.R. Aust. Canned Fruit Bd*]
Annual Report Australian Wine Board, Adelaide [*A.R. Aust. Wine Bd*]
Annual Report Basutoland Department of Agriculture, Bloemfontein [*A.R. Basutoland Dep. Agric.*]
Annual Report Bermuda Department of Agriculture, Paget East [*A.R. Bermuda Dep. Agric.*]
Annual Report Botanic Garden, Adelaide, South Australia, Adelaide [*A.R. Adelaide bot. Gdn*]
Annual Report Botanic Gardens Department, Singapore [*A.R. bot. Gdns Dep. Singapore*]
Annual Report British Columbia Department of Agriculture, Victoria, B.C. [*A.R. B.C. Dep. Agric.*]
Annual Report British Columbia Department of Agriculture, Agricultural Statistics Report, Victoria, B.C. [*A.R. B.C. Dep. Agric. agric. Statist.*]
Annual Report British Columbia Department of Agriculture, Climate of British Columbia, Victoria, B.C. [*A.R. B.C. Dep. Agric. Climate*]
Annual Report British Council, London [*A.R. Brit. Coun. Lond.*]
Annual Report British Honduras Department of Agriculture, Belize [*A.R. Brit. Honduras Dep. Agric.*]
Annual Report British West Indies Central Sugar Cane Breeding Station, Barbados [*A.R. B.W.I. centr. Sugar Cane Breed. Stat. Barbados*]
Annual Report Brooklyn Botanic Garden, New York [*A.R. Brooklyn bot. Gdn*]
Annual Report Bureau of Sugar Experiment Stations, Brisbane, Queensland [*A.R. Bur. Sugar Exp. Stats, Brisbane*]
Annual Report California Department of Agriculture, Sacramento, *see* Bull. Calif. Dep. Agric.
Annual Report Cameroons Development Corporation, Bota, Victoria [*A.R. Cameroons Developm. Corp.*]
Annual Report Canada Department of Agriculture, Canadian Committee on Food Preservation, National Research Council of Canada, Ottawa [*A.R. Canad. Cttee Food Pres.*]
Annual Report Canada Department of Agriculture, Director Experimental Farms Service, Ottawa [*A.R. Canada Dep. Agric. Dir. exp. Fms Serv.*]
Annual Report Canada Department of Agriculture Forest Insect and Disease Survey, Division of Entomology, Science Service, Ottawa [*A.R. Canada Dep. Agric. For. Insect Surv.*]
Annual Report Canada Department of Agriculture, Science Service, Ottawa [*A.R. Canada Dep. Agric. Sci. Serv.*]
Annual Report Canada Minister of Agriculture, Ottawa [*A.R. Canada Minist. Agric.*]
Annual Report Cawthron Institute, Nelson, N.Z. [*A.R. Cawthron Inst.*]
Annual Report Chemical Society, London [*A.R. chem. Soc. Lond.*]
Annual Report Coconut Research Scheme, Ceylon, Colombo [*A.R. Coconut Res. Sch. Ceylon*]
Annual Report Coffee Research and Experiment Station, Lyamungu, Moshi [*A.R. Coffee Res. Exp. Stat. Lyamungu*]
Annual Report Colonial Insecticides (Fungicides and Herbicides) Committee, London [*A.R. colon. Insecticides Cttee, Lond.*]
Annual Report Colonial Research Council, London [*A.R. colon. Res. Coun., Lond.*]
Annual Report Commonwealth Agricultural Bureaux, Farnham Royal, Bucks [*A.R. Commonw. agric. Bur. Farnham Royal*]
Annual Report of the Commonwealth Dried Fruit Control Board, Melbourne, Australia [*A.R. Commonw. Dried Fruit Contr. Bd*]
Annual Report Commonwealth Scientific and Industrial Research Organization, Melbourne, Australia [*A.R. C.S.I.R.O. Aust.*]
Annual Report Cornell University Agricultural Experiment Station, Ithaca, N.Y. [*A.R. Cornell agric. Exp. Stat.*]
Annual Report Cyprus Department of Agriculture, Nicosia [*A.R. Cyprus Dep. Agric.*]
Annual Report Delaware Agricultural Extension Service and Agricultural Experiment Station, Newark [*A.R. Del. agric. Exp. Stat.*]
Annual Report Department of Agriculture, Eire, Dublin [*A.R. Dep. agric. Dublin*]
Annual Report Department of Agriculture, Northern Region of Nigeria, Kaduna [*A.R. Dep. Agric. north. Reg. Nigeria*]
[Annual] Report of the Department of Agriculture for Scotland, Edinburgh [*A.R. Dep. Agric. Scot.*]
Annual Report Director of Agriculture, British Guiana, Georgetown [*A.R. Dir. Agric. Brit. Guiana*]
Annual Report Dominica Department of Agriculture, Roseau [*A.R. Dominica Dep. Agric.*]
Annual Report Dominion Experimental Farms, Department of Agriculture, Ottawa [*A.R. Domin. exp. Fms, Dep. Agric., Ottawa*]
Annual Report East African Agriculture and Forestry Research Organization, Nairobi [*A.R. E. Afr. Agric. For. Res. Org.*]
Annual Report East African Sisal Industry, Nairobi [*A.R. E. Afr. Sisal Ind.*]
Annual Report East Malling Research Station, near Maidstone, Kent, England [*A.R. East Malling Res. Stat.*]
Annual Report Edinburgh and East of Scotland College of Agriculture, Edinburgh [*A.R. Edinb. Coll. Agric.*]
Annual Report of the Entomological Society of Ontario, Guelph [*A.R. ent. Soc. Ont.*]
Annual Report of the Experiment Stations of the Centrale Proefstations Vereniging, Djakarta-Kota, Indonesia [*A.R. Exp. Stats C.P.V.*]
Annual Report Field Studies, Keston [*A.R. Field Stud.*]
Annual Report Fiji Department of Agriculture, Suva [*A.R. Fiji Dep. Agric.*]
Annual Report Florida Agricultural Experiment Station, Gainesville [*A.R. Fla agric. Exp. Stat.*]

Annual Report Food Investigation Board, London [*A.R. Food Invest. Bd, Lond.*]
Annual Report on Forest Research, Forestry Commission, London, *see* Report on Forest Research, London
Annual Report Forestry Commissioners, London [*A.R. For. Comm. Lond.*]
Annual Report Fruit and Vegetable Canning and Quick Freezing Research Association, Campden, Gloucestershire, England [*A.R. Fruit Veg. Pres. Res. Stat. Campden*]
Annual Report Georgia [Agricultural] Experiment Station, Experiment [*A.R. Ga Exp. Stat.*]
Annual Report Gold Coast Department of Agriculture, Accra [*A.R. Gold Coast Dep. Agric.*]
Annual Report of the Government Chemist, Tanganyika, Dar es Salaam [*A.R. Govt Chem. Tanganyika*]
Annual Report Horticultural Education Association,* Bristol [*A.R. hort. Educ. Ass.*]
Annual Report Imperial College of Tropical Agriculture, St. Augustine, Trinidad [*A.R. imp. Coll. trop. Agric., Trinidad*]
Annual Report Imperial Forestry Institute, Oxford [*A.R. imp. For. Inst. Oxford*]
Annual Report Indian Coffee Board, Bangalore [*A.R. Indian Coffee Bd*]
Annual Report Indian Council of Agricultural Research, New Delhi [*A.R. Indian Coun. agric. Res.*]
Annual Report Indian Tea Association, Scientific Department, Tocklai Experimental Station, Calcutta [*A.R. Indian Tea Ass., sci. Dep., Tocklai*]
Annual Report Indiana Agricultural Experiment Station, Lafayette [*A.R. Ind. agric. Exp. Stat.*]
Annual Report of the Inter-American Institute of Agricultural Sciences, Turrialba, Costa Rica [*A.R. Inter-Amer. Inst. agric. Sci. Turrialba*]
Annual Report Jamaica Department of Agriculture, Kingston [*A.R. Jamaica Dep. Agric.*]
Annual Report John Innes Horticultural Institution, Bayfordbury [*A.R. John Innes hort. Instn*]
Annual Report Kenya Department of Agriculture, Nairobi [*A.R. Kenya Dep. Agric.*]
Annual Report Land Settlement Association, London [*A.R. Ld Settl. Ass.*]
Annual Report Long Ashton Agricultural and Horticultural Research Station, Bristol, England [*A.R. Long Ashton agric. hort. Res. Stat.*]
[Annual] Report of the Luddington Experimental Horticulture Station, Stratford-on-Avon, Warwickshire [*A.R. Luddington exp. hort. Stat.*]
Annual Report Macaulay Institute for Soil Research, Craigiebuckler [*A.R. Macaulay Inst. Soil Res.*]
Annual Report Madras Department of Agriculture, Agricultural Stations in the Madras Presidency, Madras [*A.R. Madras Dep. Agric. agric. Stats*]
Annual Report Malaya Department of Agriculture, Kuala Lumpur [*A.R. Malaya Dep. Agric.*]
Annual Report Massachusetts Agricultural Experiment Station, Amherst [*A.R. Mass. agric. Exp. Stat.*]
Annual Report Mauritius Department of Agriculture, Port Louis [*A.R. Mauritius Dep. Agric.*]
Annual Report Michigan State Board of Agriculture, Lansing [*A.R. Mich. St. Bd Agric.*]
Annual Report Michigan Agricultural Experiment Station, Lansing [*A.R. Mich. agric. Exp. Stat.*]
Annual Report Minnesota Agricultural Experiment Station, St. Paul [*A.R. Minn. agric. Exp. Stat.*]
Annual Report Mississippi Agricultural Experiment Station, State College [*A.R. Miss. agric. Exp. Stat.*]
Annual Report Missouri Agricultural Experiment Station, Columbia [*A.R. Mo. agric. Exp. Stat.*]
Annual Report of the Montana Agricultural Experiment Station, Bozeman [*A.R. Mont. agric. Exp. Stat.*]

* Secretary at Long Ashton Res. Stat., Bristol.

Annual Report National Institute of Agricultural Botany, Cambridge [*A.R. nat. Inst. agric. Bot. Cambridge*]
Annual Report of the National Research Council of Canada, Ottawa [*A.R. nat. Res. Coun. Canada*]
Annual Report National Vegetable Research Station, Wellesbourne, Warwickshire [*A.R. nat. Veg. Res. Stat. Wellesbourne*]
Annual Report Nebraska Agricultural Experiment Station, Lincoln [*A.R. Neb. agric. Exp. Stat.*]
Annual Report New South Wales Department of Agriculture, Sydney [*A.R. N.S.W. Dep. Agric.*]
Annual Report New York State Agricultural Experiment Station, Geneva, N. York [*A.R. N.Y. St. agric. Exp. Stat.*]
Annual Report New Zealand Department of Agriculture, Wellington [*A.R. N.Z. Dep. Agric.*]
Annual Report New Zealand Department of Scientific and Industrial Research, Wellington [*A.R. D.S.I.R. N.Z.*]
Annual Report Nigeria Agricultural Department, Lagos [*A.R. Nigeria agric. Dep.*]
Annual Report North Carolina Agricultural Experiment Station, Raleigh, *see* Annual Report School of Agriculture
Annual Report of the Northern Research Station, Samaru, Zaria, Nigeria [*A.R. north. Res. Stat. Samaru*]
Annual Report Northern Rhodesia Department of Agriculture, Mazabuka [*A.R. N. Rhod. Dep. Agric.*]
Annual Report Nova Scotia Fruit Growers' Association, Kentville [*A.R. N. Scotia Fruit Gr. Ass.*]
Annual Report Nyasaland Department of Agriculture, Zomba [*A.R. Nyasaland Dep. Agric.*]
Annual Report Pennsylvania Agricultural Experiment Station, State College [*A.R. Pa agric. Exp. Stat.*]
Annual Reports on the Progress of Chemistry, London [*A.R. Progr. Chem.*]
Annual Report Queensland Department of Agriculture and Stock, Brisbane [*A.R. Qd Dep. Agric. Stk*]
Annual Report of the Research Department of the Indian Coffee Board, Balehonnur [*A.R. Res. Dep. Indian Coffee Bd*]
Annual Report of the Research Division, Ministry of Agriculture, Sudan, Wad Medani [*A.R. Sudan Res. Div. Minist. Agric.*]
Annual Report Rothamsted Experimental Station, Harpenden, England [*A.R. Rothamsted exp. Stat.*]
Annual Report Rubber Fund Board of North Borneo [*A.R. Rubb. Fund Bd N. Borneo*]
Annual Report of the Rubber Research Institute of Malaya, Kuala Lumpur [*A.R. Rubb. Res. Inst. Malaya*]
Annual Report Rural Industries Bureau, London [*A.R. Rur. Ind. Bur. Lond.*]
Annual Report Sarawak Department of Agriculture, Kuching [*A.R. Sarawak Dep. Agric.*]
Annual Report of the School of Agriculture, North Carolina State College, Raleigh [*A.R. N.C. School Agric.*]
Annual Report Scottish Horticultural Research Institute, Mylnefield, Dundee [*A.R. Scot. hort. Res. Inst.*]
Annual Report Scottish Society for Research in Plant Breeding, Edinburgh [*A.R. Scot. Soc. Res. Plant Breed.*]
Annual Report of the Secretary to the Federal Ministry of Agriculture, Federation of Rhodesia and Nyasaland, Zomba [*A.R. Minist. Agric. Fed. Rhod. Nyasaland*]
Annual Report Seychelles Department of Agriculture, Mahé [*A.R. Seychelles Dep. Agric.*]
Annual Report Sierra Leone Department of Agriculture, Freetown [*A.R. Sierra Leone Dep. Agric.*]
Annual Report of the Society for Fruit Tree Breeding, Balsgård, Sweden, *see* Verksamhetsäret . . .
Annual Report of the Somaliland Department of Agriculture and Veterinary Services, Berbera [*A.R. Somaliland Dep. Agric.*]
Annual Report South African Sugar Association Experiment Station, Mount Edgecombe, Natal [*A.R. S. Afr. Sugar Ass. Exp. Stat.*]
Annual Report South Australia Department of Agriculture, Adelaide [*A.R. S. Aust. Dep. Agric.*]

Annual Report Storrs Agricultural Experiment Station, Connecticut [*A.R. Storrs agric. Exp. Stat.*]
Annual Report St. Vincent Agricultural Department, Kingstown [*A.R. St. Vincent agric. Dep.*]
Annual Report Sugar Industry Research Institute, Port Louis, Mauritius [*A.R. Sugar Ind. Res. Inst. Mauritius*]
Annual Report Swaziland Department of Native Land Settlement, Mbabane [*A.R. Swaziland Dep. Native Land Settlement*]
Annual Report Tanganyika Department of Agriculture, Dar es Salaam [*A.R. Tanganyika Dep. Agric.*]
Annual Report Tea Culture in Assam, Director of Agriculture, Assam, Shillong [*A.R. Tea Culture in Assam*]
Annual Report Tea Research Institute of Ceylon, St. Coombs, Talawakelle [*A.R. Tea Res. Inst. Ceylon*]
Annual Report of the Tea Research Institute of East Africa, Kericho, Kenya [*A.R. Tea Res. Inst. E. Afr.*]
Annual Report on Tobacco Statistics, U.S. Department of Agriculture, Washington, D.C. [*A.R. Tobacco Statist. U.S. Dep. Agric.*]
Annual Report Uganda Department of Agriculture, Entebbe [*A.R. Uganda Dep. Agric.*]
Annual Report United Planters' Association of Southern India, Tea Scientific Section, Madras [*A.R. U.P.A.S.I., Tea sci. Sect.*]
Annual Report of the Virginia Agricultural Experiment Station, Blacksburg [*A.R. Va agric. Exp. Stat.*]
Annual Report Washington Agricultural Experiment Stations, Pullman [*A.R. Wash. agric. Exp. Stats, Pullman*]
Annual Report Wattle Research Institute, Pietermaritzburg, S. Africa [*A.R. Wattle Res. Inst. Pietermaritzburg*]
Annual Report West African Cocoa Research Institute, Gold Coast, Tafo [*A.R. W. Afr. Cocoa Res. Inst.*]
Annual Report of the West African Institute for Oil Palm Research, Benin, Nigeria [*A.R. W. Afr. Inst. Oil Palm Res.*]
Annual Report West of Scotland Agricultural College, Glasgow [*A.R. W. Scot. agric. Coll.*]
Annual Report West Virginia Agricultural Experiment Station, Morgantown [*A.R. W. Va agric. Exp. Stat.*]
Annual Report Wisconsin Agricultural Experiment Station, Madison [*A.R. Wis. agric. Exp. Stat.*]
Annual Report Wye College, Department of Hop Research, Wye, Kent [*A.R. Wye Coll., Dep. Hop Res.*]
Annual Report Zanzibar Department of Agriculture [*A.R. Zanzibar Dep. Agric.*]
Annual Review of Biochemistry, Stanford, California [*Annu. Rev. Biochem.*]
Annual Review Canterbury Agricultural College, Lincoln, N.Z. [*Annu. Rev. Canterbury agric. Coll.*]
Annual Review of Microbiology, Stanford, California [*Annu. Rev. Microbiol.*]
Annual Review of Plant Physiology, Stanford, California [*Annu. Rev. Plant Physiol.*]
Annual, Windward Islands, Grenada [*Annual, Grenada*]
Apple Research Digest, Yakima, Wash. [*Apple Res. Dig. Yakima*]
Araneta Journal of Agriculture, Rizal, Philippines [*Araneta J. Agric.*]
Årbog for Gartneri, Copenhagen [*Årbog Gartneri*]
Arboriculture Fruitière, Paris [*Arboric. fruit.*]
Archief voor de Kofficultuur, Bogor (Buitenzorg) [*Arch. Koffiecult.*]
Archief voor de Theecultuur, Bogor (Buitenzorg) [*Arch. Theecult.*]
Archiv für Gartenbau, Berlin [*Arch. Gartenb.*]
Archiv der Julius Klaus Stiftung, Zürich, Switzerland [*Arch. Klaus Stift.*]
Archives of Biochemistry and Biophysics, Lancaster, Pa [*Arch. Biochem. Biophys.*]
Archives des Recherches Agronomiques et Pastorales au Viêt-Nam, Saigon [*Arch. Rech. agron. pastor. Viêt-Nam*]
Archives of Rubber Cultivation, Bogor [*Arch. Rubb. Cult. Bogor*]
Archivum Societatis Zoologicae-Botanicae Fennicae, *see* Suomolaisen Elain- ja Kasvitieteelisen, *etc.*
Arecanut Journal, Kozhikode, India [*Arecanut J.*]
Arhiv za Poljoprivredne Nauke, Belgrade [*Arh. poljopr. Nauk.*]
Arquivos do Instituto Biológico, São Paulo, Brazil [*Arq. Inst. biol. S. Paulo*]
Aslib Book-List, London [*Aslib Bk-list*]
Atti Accademia Italiana Della Vite e del Vino, Siena e Firenze [*Atti Accad. ital. Vite*]
Atti dell'Istituto Botanica della Università di Pavia, Italy [*Atti Ist. bot. Univ. Pavia*]
Australian Journal of Agricultural Research, Melbourne [*Aust. J. agric. Res.*]
Australian Journal of Biological Sciences, Melbourne [*Aust. J. biol. Sci.*]
Australian Journal of Botany, Melbourne [*Aust. J. Bot.*]
Australian Journal of Science, Sydney, N.S.W. [*Aust. J. Sci.*]
Australian Sugar Journal, Brisbane [*Aust. Sugar J.*]

The Bee World, London [*Bee World*]
Beiträge zur Entomologie, Deutsches Entomologisches Institut, Berlin [*Beitr. Ent.*]
Beerenobstschriftum. Referate . . . Rethmar über Lehrte, Germany, [*Beerenobstschrift.*]
Bergcultures, Djakarta, Indonesia [*Bergcultures*]
Bericht Lehr- und Forschungsanstalt für Wein-, Obst- und Gartenbau, Geisenheim am Rhein [*Ber. Lehr-u. ForschAnst. Geisenheim*]
Berichte des Deutschen Wetterdienstes in der US-Zone, Bad Kissingen [*Ber. dtsch. Wetterdienst. U.S. Zone*]
Berichte des Instituts für Tabakforschung Dresden [*Ber. Inst. Tabakforsch. Dresden*]
Berichte des Ōhara Instituts für landwirtschaftliche Forschungen, Kurashiki, Japan [*Ber. Ōhara Inst. landw. Forsch.*]
Better Crops with Plant Food, Washington, D.C. [*Bett. Crops*]
Better Fruit, Portland, Oregon [*Bett. Fruit*]
Bibliographie der Pflanzenschutzliteratur, Berlin [*Bibl. PflSchLit.*]
Bibliographien des Deutschen Wetterdienstes, Bad Kissingen [*Bibl. dtsch. Wetterdienst.*]
Bibliography of Agriculture, Washington, D.C. [*Bibl. Agric. Wash.*]
Biennial Report Hawaii Agricultural Experiment Station, Honolulu [*Bienn. Rep. Hawaii agric. Exp. Stat.*]
Biennial Report Oklahoma Agricultural Experiment Station, Stillwater [*Bienn. Rep. Okla agric. Exp. Stat.*]
Biljna Proizvodnja, Zagreb [*Bilj. Proizv.*]
Biochemical Journal, Liverpool [*Biochem. J.*]
Biochimica et Biophysica Acta, Amsterdam [*Biochim. biophys. Acta*]
Biohimija (Biochemistry) Moscow [Russian] [Biohimija]
Biological Abstracts, Menasha, Wis. [*Biol. Abstr.*]
Biological Reviews and Biological Proceedings of the Cambridge Philosophical Society, Cambridge [*Biol. Rev.*]
O Biólogico, São Paulo, Brazil [*Biológico*]
Biologisches Zentralblatt, Leipzig [*Biol. Zbl.*]
Biometrics, Washington, Z.C. [*Biometrics*]
Biometrika, Cambridge [*Biometrika*]
Bodenkultur, Vienna [*Bodenkultur*]
Boletim Junta Nacional das Frutas, Lisbon [*Bol. Junta nac. Frut. Lisbon*]
Boletím da Superintendência dos Serviços do Café, São Paulo [*Bol. Super. Serv. Café, S. Paulo*]
Boletín Informativo, Organo de la Biblioteca del Centro Nacional de Investigaciones de Café, Chinchina-Caldas, Colombia [*Bol. inf. Café, Chinchina-Caldas*]
Boletin del Instituto Nacional de Investigaciones Agronomicas, Madrid [*Bol. Inst. Invest. agron. Madrid*]
Boletín de Oleicultura Internacional, Madrid [*Bol. Oleic. int.*]
Boletín técnico, Federacion Nacional de Cafeteros, Chinchina-Caldas, Colombia [*Bol. téc. Fed. nac. Cafet. Chinchina-Caldas*]

Boletin Trimestral de Experimentacion Agropecuaria, P.C.E.A., Lima, Peru [*Bol. trim. Exp. agropec. P.C.E.A., Lima*]
Bollettino della Stazione di Patologia Vegetale di Roma, Rome [*Boll. Staz. Pat. veg. Roma*]
Bollettino di Zoologia agraria e di Bachicoltura, Milan [*Boll. Zool. agrar.*]
Botanical Gazette, Chicago, Ill. [*Bot. Gaz.*]
Botanical Review, Lancaster, Pa [*Bot. Rev.*]
Botaničeskii Žurnal, Moscow and Leningrad [Russian] [*Bot. Žurnal*]
Botyu-Kagaku, Scientific insect control. Bulletin of the Institute of Insect Control, Kyoto University, Kyoto, Japan [*Botyu-Kagaku*]
Bragantia, Campinas, Sao Paulo, Brazil [*Bragantia*]
Brittonia, New York [*Brittonia*]
Brooklyn Botanic Garden Record, *see* Plants and Gardens.
Bulletin Agricole du Congo Belge, Bruxelles [*Bull. agric. Congo belge*]
Bulletin Agronomique, Ministère de la France d'Outre Mer, Nogent sur Marne [*Bull. agron. Fr. d'out. mer*]
Bulletin California Department of Agriculture, Sacramento [*Bull. Calif. Dep. Agric.*]
Bulletin Climatologique Annuel du Congo Belge et du Ruanda-Urundi, Bruxelles [*Bull. clim. annu. Congo belge*]
Bulletin of Current Literature, The Brewing Industry Research Foundation, Nutfield, Surrey [*Bull. curr. Lit. Brewing*]
Bulletin of the Ecological Society of America, Fredericksburg, Va [*Bull. ecol. Soc. Amer.*]
Bulletin of Entomological Research, London [*Bull. ent. Res.*]
Bulletin of the Faculty of Horticulture and Viticulture, University of Agricultural Sciences, Budapest, *see* Agrártudományi
Bulletin Horticole, Liège [*Bull. hort. Liège*]
Bulletin Horticultural Division, Tôkai-Kinki Agricultural Experimental Station, Okitsu, Japan [*Bull. Tokai-Kinki agric. Stat. hort. Div.*]
Bulletin Horticultural Section (Branch) of Kanagawa Agricultural Experiment Station, Kanagawa, Japan [*Bull. Kanagawa agric. Exp. Stat. hort. Sect.*]
Bulletin of the Indian Central Coconut Committee, Ernakulam [*Bull. Indian centr. Coconut Cttee*]
Bulletin d'Information de l'Institut National pour l'Étude Agronomique du Congo Belge, Bruxelles [*Bull. Inf. I.N.E.A.C.*]
Bulletin of Insect Control, Kyoto University, *see* Botyu-Kagaku
Bulletin de l'Institut Agronomique et des Stations de Recherches de Gembloux, Belgium [*Bull. Inst. agron. Gembloux*]
Bulletin de l'Institut Botanique, Académie Bulgare des Sciences, Sofia [*Bull. Inst. bot. Sofia*]
Bulletin du Jardin Botanique de l'État à Bruxelles, Belgium [*Bull. Jard. bot. Bruxelles*]
Bulletin Mushroom Growers Association, Yaxley, Peterborough [*Bull. Mushroom Gr. Ass.*]
Bulletin New York State Flower Growers Inc., Ithaca, N.Y. [*Bull. N.Y. St. Flower Grs*]
Bulletin de l'Office International du Vin, Paris [*Bull. Off. int. Vin*]
Bulletin of the Research Council of Israel, Rehovot, Sections B, C and D [*Bull. Res. Coun. Israel*]
Bulletin Scientifique. Conseil des Académies de la RPF. Yugoslavie, Belgrade [*Bull. sci. Cons. Acad. RPF. Belgrade*]
Bulletin of the Tea Division, Tôkai-Kinki Agricultural Experiment Station, Kanaya, Japan [*Bull. Tôkai-Kinki agric. Exp. Stat. Tea Div.*]
Bulletin of the Torrey Botanical Club and Torreya, Lancaster, Pa [*Bull. Torrey bot. Cl.*]
Butler University Botanical Studies, Indianopolis [*Butler Univ. bot. Stud.*]

Cacao, Turrialba [*Cacao*]
Cacao en Colombia, Organo oficial de la Campaña Nacional de Cacao, Palmira [*Cacao en Colomb.*]
California Agriculture, Berkeley [*Calif. Agric.*]
California Citrograph, Los Angeles [*Calif. Citrogr.*]
Canadian Entomologist, Ottawa [*Canad. Ent.*]
Canadian Journal of Agricultural Science, Ottawa [*Canad. J. agric. Sci.*]
Canadian Journal of Biochemistry and Physiology, Ottawa [*Canad. J. Biochem.*]
Canadian Journal of Botany, Ottawa [*Canad. J. Bot.*]
Canadian Journal of Chemistry, Ottawa [*Canad. J. Chem.*]
Canadian Journal of Microbiology, Ottawa [*Canad. J. Microbiol.*]
Canadian Journal of Technology, Ottawa [*Canad. J. Tech.*]
Canadian Journal of Zoology, Ottawa [*Canad. J. Zool.*]
Cane Growers' Quarterly Bulletin, Brisbane [*Cane Grs' quart. Bull.*]
Caoutchouc "Série Indochine", Communication aux Planteurs, Saigon [*Caoutch. Sér. Indoch.*]
Ceylon Coconut Quarterly, Lunuwila [*Ceylon Coconut Quart.*]
Ceylon Journal of Science, Section A, Botany, Colombo [*Ceylon J. Sci. (A)*]
Chemische Berichte, Weinheim/Bergstrasse, Germany [*Chem. Ber.*]
Chemistry and Industry, London [*Chem. Ind. Lond.*]
Chronica Botanica, Waltham, Mass. [*Chron. Bot.*]
Citrus Grower, Port Elizabeth, S. Africa [*Citrus Gr*]
Citrus Industry, Bartow, Florida [*Citrus Ind.*]
Citrus Leaves, Los Angeles [*Citrus Leaves*]
Citrus Magazine, Tampa, Florida [*Citrus Mag.*]
Citrus News, Melbourne, Australia [*Citrus News*]
Collected Papers of the Canadian Committee on Food Preservation, Ottawa [*Coll. Pap. Canad. Cttee Food Pres.*]
Collected Papers, Macaulay Institute for Soil Research, Aberdeen [*Coll. Pap. Macaulay Inst. Soil Res.*]
Collective Farming, Moscow [Russian], *see* Kolhoznoe Proizvodstvo
Colonial Plant and Animal Products, London [*Colon. Plant Anim. Prod.*]
Combined Proceedings of the National Shade Tree Conference and Western Shade Tree Conference, held at various places, U.S.A. [*Comb. Proc. nat. Shade Tree Conf.*]
Commercial Grower, London [*Comm. Gr*]
Commercial Grower Handbook and Diary, London [*Comm. Gr Handb.*]
Commonwealth Phytopathological News, Kew [*Commonw. phytopath. News*]
Comptes Rendus de l'Académie Bulgare des Sciences, Sofia [*C.R. Acad. bulg. Sci.*]
Comptes Rendus hebdomadaires des Séances de l'Académie d'Agriculture de France, Paris [*C.R. Acad. Agric. Fr.*]
Contributions from Boyce Thompson Institute, Menasha, Wis. and editorial office Yonkers, N.Y. [*Contr. Boyce Thompson Inst.*]
Contributions from the Brooklyn Botanic Garden, Brooklyn, N.Y. [*Contr. Brooklyn bot. Gdn*]
Contributions of the General Agricultural Research Station, Bogor, Indonesia [*Contr. gen. agric. Res. Stat. Bogor*]
Countryman, Nicosia, Cyprus [*Countryman, Nicosia*]
Courrier Horticole, Bruxelles [*Courr. hort.*]
Cultuur en Handel, Kortenberg, Belgium [*Cult. Hand.*]
Current Science, Bangalore [*Curr. Sci.*]

Daffodil and Tulip Year Book, London [*Daffodil Tulip Yearb. Lond.*]
Darwiniana, Buenos Aires [*Darwiniana*]
Deciduous Fruit Grower, Capetown [*Dec. Fruit Gr*]
Deutsche Baumschule, Aachen [*Dtsch. Baumsch.*]
Deutsche Gartenbau, Berlin [*Dtsch. Gartenb.*]
Dissertation Abstracts, Ann Arbor, Michigan [*Diss. Abstr.*]
Doklady Akademii Nauk SSSR (Proceedings of the Academy of Sciences of the U.S.S.R.), Moscow [Russian] [*Doklady Akad. Nauk*]

Doklady Vsesojuznoĭ Akademii Seljskohozjaĭstvennyh Nauk imeni V.I. Lenina (Proceedings of the Lenin Academy of Agricultural Sciences), Moscow [Russian] [*Doklady vsesojuz. Akad. seljsk. Nauk*]
Down to Earth, Midland, Michigan [*Down to Earth*]

East African Agricultural Journal, Nairobi [*E. Afr. agric. J.*]
Ecology, Durham, N.C. [*Ecology*]
Economic Botany, New York [*Econ. Bot.*]
Empire Journal of Experimental Agriculture, Oxford [*Emp. J. exp. Agric.*]
Endeavour, London [*Endeavour*]
Entomologist, London [*Entomologist*]
Entomologists' Monthly Magazine, London [*Ent. mon. Mag.*]
Erhvervsfrugtavleren, Odense, Denmark [*Erhvervsfrugtavl.*]
Essex Farmers' Journal, Chelmsford [*Essex Fmrs' J.*]
Euphytica, Wageningen, Holland [*Euphytica*]
Evolution, Lancester, Pa [*Evolution*]
Experimental Husbandry, London [*Exp. Husbry*]

F.A.O. Documentation, Rome [*F.A.O. Documentation*]
Farm Economist, Oxford [*Fm Econ., Oxf.*]
Farm Mechanization, London [*Fm Mechaniz.*]
Farmacognosia. Anales del Instituto Jose Celestino Mutis, Madrid [*Farmacognosia*]
Farmer. Journal of the Jamaica Agricultural Society, Kingston, Jamaica [*Fmr Jamaica*]
Farmer and Stockbreeder, London [*Fmr and Stk-Breed.*]
Farmers' Newsletter, Leeton, N.S.W. [*Fmrs' Newslett.*]
Farmers' Weekly, London [*Fmrs' Wkly*]
Farming in South Africa, Pretoria [*Fmg S. Afr.*]
Field Crop Abstracts, Hurley, Berks [*Field Crop Abstr.*]
Florists Exchange, New York [*Flor. Exch.*]
Food and Agricultural Legislation, Rome [*Food agric. Legisl.*]
Food Preservation Quarterly, Sydney [*Food Pres. Quart.*]
Food Science Abstracts, London [*Food Sci. Abstr.*]
Foreign Agriculture, Washington, D.C. [*Foreign Agric.*]
Foreign Agriculture Circular, U.S. Department of Agriculture, Washington, D.C. [*Foreign Agric. Circ.*]
Forestry, London [*Forestry*]
Forestry Abstracts, Oxford [*For. Abstr.*]
Forskning og Forsøk I Landbruket, Oslo [*Forskn. Landbruk.*]
Fruit, Chelmsford [*Fruit*]
Fruit Annual, London [*Fruit Annu., Lond.*]
Fruit Belge, Gembloux [*Fruit belge*]
Fruit Intelligence, London [*Fruit Intelligence*]
Fruit and Produce, Auckland, N.Z. [*Fruit and Prod.*]
Fruit Varieties and Horticultural Digest, East Lansing, Michigan [*Fruit Var. hort. Dig.*]
Fruit World Annual, Melbourne [*Fruit World Annu.*]
Fruit World and Market Grower, Melbourne and Sydney [*Fruit World, Melbourne*]
Fruit Year Book, R.H.S. London [*Fruit Yearb.*]
Fruits d'Outre Mer, Paris [*Fruits d'Outre Mer*]
Fruits et Primeurs de l'Afrique du Nord, Casablanca, Morocco (La Revue Française de l'Oranger) [*Fruits et Prim.*]
Fruitteelt, The Hague [*Fruitteelt*]
Frukt og Baer, Oslo [*Frukt og Baer*]
Fruktodlaren, Stockholm [*Fruktodlaren*]
Frutticoltura, Bologna [*Frutticoltura*]

Garden Journal of the New York Botanical Garden, New York [*Gdn J. N.Y. bot. Gdn*]
Gardeners' Chronicle, London [*Gdnrs' Chron.*]
Gardens' Bulletin, Singapore [*Gdns' Bull. Singapore*]
Gartenbauwissenschaft, Munich [*Gartenbauwiss.*]
Gartenwelt, Hamburg [*Gartenwelt*]
Gartneryrket, Oslo [*Gartneryrket*]
Gordian, Hamburg [*Gordian*]
Grower, London [*Grower*]
Growth, Worcester, Mass. [*Growth*]
Hassadeh, Tel-Aviv [Hebrew] [*Hassadeh*]
Hawaii Farm Science, Honolulu [*Hawaii Fm Sci.*]
Hawaiian Planters' Record, Honolulu [*Hawaii. Plant. Rec.*]
Helminthological Abstracts, St. Albans [*Helminth. Abstr.*]
Herbage Abstracts, Hurley, Berks [*Herb. Abstr.*]
Heredity, London [*Heredity*]
Hilgardia, Berkeley, California [*Hilgardia*]
Höfchen Briefe, Leverkusen, Germany [*Höfchen Briefe*]
Horticultura, Odense, Denmark [*Horticultura*]
Horticulture, Moscow [Russian], *see* Sad i Ogorod
Humus, Milan [*Humus*]
Hungarian Agricultural Review, Budapest [*Hung. agric. Rev.*]

Idia (Informativo de Investigaciones Agricolas, Buenos Aires) [*Idia*]
Indian Coconut Journal, Ernakulam, S. India [*Indian Coconut J.*]
Indian Coffee, Bangalore [*Indian Coffee*]
Indian Farming, Delhi [*Indian Fmg*]
Indian Journal of Agricultural Science, Delhi [*Indian J. agric. Sci.*]
Indian Journal of Horticulture, New Delhi [*Indian J. Hort.*]
Indian Rubber Board Bulletin, Kottayam [*Indian Rubb. Bd Bull.*]
Indian Tobacco, Madras [*Indian Tobacco*]
Indonesian Journal for Natural Science, Bandung [*Indones. J. nat. Sci.*]
Information Bulletin, Inter-American Institute of Agricultural Sciences, Turrialba, Costa Rica [*Inf. Bull. Turrialba*]
Information and Research of the Tropical Products Department, Royal Tropical Institute, Amsterdam [*Inf. Res. Trop. Prod. Dep. roy. trop. Inst. Amsterdam*]
Informatore Fitopatologico, Bologna, Italy [*Inf. fitopat.*]
Informe Anual Instituto Interamericano de Ciencias Agricolas, Turrialba, Costa Rica [*Inf. an. Inst. interamer. Cienc. agric. Turrialba*]
Informe Mensuel, Estacion Experimental Agricola de "La Molina", Lima, Peru [*Inf. mens. La Molina*]
Inlichtingen en Onderzoekingen van de Afdeling Tropische Producten, *see above*, Information and Research
Insect Pest Survey, Department of Agriculture, Division of Science Services, Entomological Branch, New South Wales, Sydney [*Insect Pest Surv. N.S.W. Dep. Agric.*]
International Sugar Journal, London [*Int. Sugar J.*]
Investigations, Department of Agriculture, Jamaica, Kingston [*Invest. Dep. Agric. Jamaica*]
Iowa Farm Science, Ames, Iowa [*Ia Fm Sci.*]
Italia Agricola, Rome [*Ital. agric.*]
Izvestija Akademii Nauk SSSR, Ser. Biol., Moscow [Russian] [*Izv. Akad. Nauk S.S.S.R. Ser. biol.*]

Jaarboek Plantenziektenkundige Dienst te Wageningen, Wageningen [*Jaarb. PlZiekt. Dienst Wageningen*]
Jaarboek Proefstation voor de Boomkwekerij te Boskoop, Holland [*Jaarb. Proefst. Boomkwek. Boskoop*]
Jaarverslag Bedrijfsvoorlichtingsdienst voor de Tuinbouw in de Provincie Oost-Vlaanderen, Belgium [*Jversl. Tuinb. Prov. Oost-Vlaanderen*]
Jaarverslag Instituut voor Tuinbouwtechniek, Wageningen [*Jversl. Tuinbouwtech., Wageningen*]
Jaarverslag Koninklijk Instituut voor de Tropen, Amsterdam [*Jversl. Inst. Trop., Amsterdam*]
Jaarverslag Proefstation voor de Bloemisterij in Nederland te Aalsmeer, Holland [*Jversl. Proefstat. Bloem. Aalsmeer*]
Jaarverslag Proefstation voor de Fruitteelt in de Volle Grond, Wilhelminadorp [*Jversl. Proefst. Fruit. volle Grond, Wilhelminadorp*]
Jaarverslag Proefstation voor de Groenten- en Fruitteelt onder Glas te Naaldwijk [*Jversl. Proefst. Groent. Fruit. Glas Naaldwijk*]
Jaarverslag Proefstation voor de Groenteteelt in de Volle Grond, Alkmaar [*Jversl. Proefst. Groente. volle Grond, Alkmaar*]

Jaarverslag Tuinbouwkundig Onderzoek, Ministerie van Landbouw, Visserij en Voedselvoorziening, 's-Gravenhage [*Jversl. tuinb. Onderz. Minist. Landb. 's-Gravenhage*]
Jahresbericht der Eidg. Versuchsanstalt f. Obst-, Wein-, u. Gartenbau in Wädenswil, Switzerland [*Jber. Versuchsanst. Wädenswil*]
Jahresbericht Schweizerisches Tropeninstitut in Basel, Switzerland [*Jber. schweiz. Tropeninst. Basel*]
Jahresberichte des Deutschen Wetterdienstes, Frankfurt/M. [*Jber. dtsch. Wetterdienst.*]
Jahresberichte der Pflanzenschutzämter Deutscher Pflanzenschutzdienst, Braunschweig [*Jber. Pflanzenschutzämter Braunschweig*]
Japanese Journal of Botany, Tokyo [*Jap. J. Bot.*]
Jardins de France, Paris [*Jardins Fr.*]
Journal of the Agricultural Association of China, Nanking [Chinese] [*J. agric. Ass. China*]
Journal of Agricultural Engineering Research, Silsoe [*J. agric. Engng Res.*]
Journal of Agricultural and Food Chemistry, Washington, D.C. [*J. agric. Food Chem.*]
Journal of Agricultural Science, Cambridge [*J. agric. Sci.*]
Journal of the Agricultural Society of Trinidad and Tobago, Port of Spain [*J. agric. Soc. Trin. Tob.*]
Journal d'Agriculture Tropicale et de Botanique Appliquée, Paris [*J. Agric. trop. Bot. appl.*]
Journal of Agriculture of the University of Puerto Rico, Rio Piedras [*J. Agric. Univ. P.R.*]
Journal of Agriculture of Victoria, Australia, Melbourne [*J. Agric. Vict.*]
Journal of Agriculture of Western Australia, Perth [*J. Agric. W. Aust.*]
Journal of the American Chemical Society, Easton, Pa [*J. Amer. chem. Soc.*]
Journal of the American Statistical Association, Menasha, Wis. [*J. Amer. statist. Ass.*]
Journal of Applied Bacteriology, Reading [*J. appl. Bact.*]
Journal of Applied Chemistry, London [*J. appl. Chem.*]
Journal of the Arnold Arboretum, Jamaica Plain, Mass. [*J. Arnold Arbor.*]
Journal of the Association of Official Agricultural Chemists, Washington, D.C. [*J. Ass. off. agric. Chem. Wash.*]
Journal of the Australian Institute of Agricultural Science, Sydney [*J. Aust. Inst. agric. Sci.*]
Journal of Biological Chemistry, Baltimore, Md [*J. biol. Chem.*]
Journal of the Chemical Society, London [*J. chem. Soc. Lond.*]
Journal of the Department of Agriculture, Dublin [*J. Dep. Agric. Dublin*]
Journal of the Department of Agriculture of South Australia, Adelaide [*J. Dep. Agric. S. Aust.*]
Journal of Economic Entomology, Menasha, Wis. [*J. econ. Ent.*]
Journal of Experimental Biology, Cambridge [*J. exp. Biol.*]
Journal of Experimental Botany, Oxford [*J. exp. Bot.*]
Journal of the Faculty of Agriculture, Kyushu University, Fukuoka, Japan [*J. Fac. Agric. Kyushu Univ.*]
Journal of General Microbiology, Cambridge [*J. gen. Microbiol.*]
Journal of Genetics, London [*J. Genet.*]
Journal of Helminthology, London [*J. Helminth.*]
Journal of Heredity, Washington, D.C. [*J. Hered.*]
Journal of the Horticultural Association of Japan, Tokyo [*J. hort. Ass. Japan*]
Journal of Horticultural Science, London [*J. hort. Sci.*]
Journal of the Institute of Brewing, London [*J. Inst. Brew.*]
Journal of the Institute of Corn and Agricultural Merchants Ltd., London [*J. Inst. Corn agric. Merch.*]
Journal of the Jamaican Association of Sugar Technologists, Kingston [*J. Jamaican Ass. Sugar Tech.*]
Journal of the Linnean Society of London, Botany, London [*J. Linn. Soc. (Bot.)*]
Journal of the Linnean Society of London, Zoology, London [*J. Linn. Soc. (Zool.)*]
Journal of the Madras University, Section B, Madras [*J. Madras Univ., Sect. B*]
Journal of the National Institute of Agricultural Botany, Cambridge [*J. nat. Inst. agric. Bot.*]
Journal of the Quekett Microscopical Club, London [*J. Quekett micr. Cl.*]
Journal of the Rio Grande Valley Horticultural Society, Weslaco, Texas [*J. Rio Grande Valley hort. Soc.*]
Journal of the Royal Agricultural Society of England, London [*J. roy. agric. Soc.*]
Journal of the Royal Horticultural Society, London [*J. roy. hort. Soc.*]
Journal of the Royal Society of Arts, London [*J. roy. Soc. Arts*]
Journal of the Royal Statistical Society, Series B (Methodological), London [*J. roy. statist. Soc. B*]
Journal of the Royal Swedish Academy of Agriculture, Stockholm [*J. roy. Swedish Acad. Agric.*]
Journal of the Rubber Research Institute of Malaya, Kuala Lumpur [*J. Rubb. Res. Inst. Malaya*]
Journal of the Science of Food and Agriculture, London [*J. Sci. Food Agric.*]
Journal of the Scientific Agricultural Society of Finland, Helsinki, *see* Maataloustieteellin Aikakauskirja
Journal of Scientific and Industrial Research, New Delhi, India [*J. sci. industr. Res., India*]
Journal of Scientific Instruments, London [*J. sci. Instrum.*]
Journal of Soil Science, Oxford [*J. Soil Sci.*]
Journal of South African Botany, Newlands, C.P. [*J. S. Afr. Bot.*]
Journal of the Sports Turf Research Institute, Bingley, Yorkshire [*J. Sports Turf Res. Inst.*]
Journal of the Washington Academy of Sciences, Menasha, Wis. [*J. Wash. Acad. Sci.*]
Journal of the West African Institute for Oil Palm Research, Benin, Nigeria [*J. W. Afr. Inst. Oil Palm Res.*]

Kent Farmer, Maidstone [*Kent Fmr*]
Kew Bulletin, London [*Kew Bull.*]
Kolhoznoe Proizvodstvo (Collective Farming), Moscow [Russian] [*Kolhoz. Proizv.*]
Kongelige Veterinaer-og Landbohøjskole Aarsskrift, Copenhagen, *see* Yearbook of the Royal Veterinary and Agricultural College
Ktavim (Records of the Agricultural Research Station), Rehovot, Israel [*Ktavim*]
Kühn-Archiv, Arbeiten aus d. Landwirtschaft. Institut d. Univ. Halle, Berlin [*Kühn-Arch.*]
Kungliga Lantbruksakademiens Tidskrift, Stockholm, *see* Journal of the Royal Swedish Academy of Agriculture
Kungliga Lantbrukshögskolans Annaler, Uppsala, *see* Annals of the Royal Agricultural College of Sweden

Laboratory Practice, London [*Lab. Pract.*]
Landbouwkundig Tijdschrift, Wageningen [*Landbouwk. Tijdschr.*]
Landwirtschaftliche Forschung, Darmstadt, Germany [*Landw. Forsch.*]
Landwirtschaftliches Jahrbuch der Schweiz, Bern [*Landw. Jb. Schweiz*]
Lilloa, Tucumán, Argentina [*Lilloa*]
Lily Year Book, London [*Lily Yearb. Lond.*]
List of References to Boron Literature, [published quarterly by] American Potash Institute, Washington, D.C. [*List Refs Boron Lit.*]
Lloydia, Cincinnati, Ohio [*Lloydia*]

Maataloustieteellinen Aikakauskirja, Helsinki (Journal of the Scientific Agricultural Society of Finland) [*Maataloust. Aikakausk.*]
Madjalah Ilmu Alam Untuk Indonesia, Bandung, *see* Indonesian Journal for Natural Science
Maine Farm Research, Orono [*Me Fm Res.*]
Malayan Agricultural Journal, Kuala Lumpur [*Malay. agric. J.*]

Manx Journal of Agriculture, Douglas, I.O.M. [*Manx J. Agric.*]
Market Growers' Journal, Louisville, Ky [*Market Grs' J.*]
Materiae Vegetabiles, The Hague [*Maveg.*]
Meddelanden från Lantbrukshögskolans Jordbruksförsöksanstalten, Stockholm and other places [*Meddel. Lantbruksh. Jordbruksf.*]
Mededeling Comite ter Bestudering en Bestrijding van Ziekten in Iepen en Andere Boomsoorten, Instituut voor Toegepast Biologische Onderzoek in de Natuur, Arnhem [*Meded. Com. Bestud. Bestrijd. Ziekt. Iep.*]
Mededelingen, Commissie voor Hydrologisch Onderzoek T.N.O., 's-Gravenhage [*Meded. Commiss. hydrol. Onderz. T.N.O.*]
Mededeling van het Instituut voor Toegepast Biologisch Onderzoek in de Natuur, Arnhem [*Meded. Inst. toegep. biolog. Onderz. Nat.*]
Mededeling van het Instituut voor de Veredeling van Tuinbouwgewassen, Wageningen [*Meded. Inst. Vered. Tuinbouwgew.*]
Mededelingen. Directeur van de Tuinbouw, The Hague [*Meded. Dir. Tuinb.*]
Mededelingen van de Landbouwhogeschool te Wageningen [*Meded. LandbHoogesch. Wageningen*]
Mededelingen van de Plantenziektenkundige Dienst te Wageningen [*Meded. PlZiekt. Dienst Wageningen*]
Mededelingen van het Proefstation voor de Groenten- en Fruitteelt onder Glas, Naaldwijk [*Meded. Proefst. Groent. Fruit. Glas Naaldwijk*]
Meldinger fra Statens Plantevern (Statens Plantepatologiske Institutt) Oslo [*Meld. Stat. Plantevern*]
Meldinger fra Norges Landbrukshogskole, Oslo [*Meld. norg. LandbrHøgsk.*]
Memoirs of the College of Agriculture, Kyoto Imperial University, Kyoto, Japan [*Mem. Coll. Agric. Kyoto Univ.*]
Memoirs of Kagawa Agricultural College, Kagawa-ken [*Mem. Kagawa agric. Coll.*]
Memoirs of the Faculty of Agriculture, National Taiwan University, Taipei, Formosa [*Mem. Fac. Agric. Nat. Taiwan Univ.*]
Memoirs Tokai Horticultural Experiment Station, Okitsu, Japan [*Mem. Tokai hort. Exp. Stat.*]
Memoria Conferencia Anual Asociacion de Técnicos Azucareros de Cuba, Havana [*Mem. Conf. anu. Asoc. Téc. Azucar. Cuba*]
Meteorological Magazine, London [*Met. Mag.*]
Meteoros, Buenos Aires [*Meteoros*]
Minnesota Horticulturist, Minneapolis [*Minn. Hort.*]
Mississippi Farm Research, State College, Miss. [*Miss. Fm Res.*]
Mitteilungen aus der Biologischen Zentralanstalt für Land- und Forstwirtschaft, Berlin-Dahlem [*Mitt. biol. Zentralanst. Berlin-Dahlem*]
Mitteilungen des Deutschen Wetterdienstes in der US-Zone, Bad Kissingen [*Mitt. dtsch. Wetterdienst. U.S. Zone*]
Mitteilungen der Höheren Bundeslehr- und Versuchsanstalten für Wein- und Obstbau, Klosterneuburg, für Gartenbau, Schönbrunn, Series A & B, Klosterneuburg [*Mitt. Klosterneuburg*]
Mitteilungen des Obstbauversuchsringes des Alten Landes, Jork, Germany [*Mitt. ObstVersuchsringes Jork*]
Mitteilungen für die Schweizerische Landwirtschaft, Frauenfeld [*Mitt. schweiz. Landw.*]
Monthly Agricultural Report, Ministry of Agriculture, Northern Ireland, Belfast [*Mon. agric. Rep. Minist. Agric. Belfast*]
Monthly Bulletin of Agricultural Economics and Statistics, F.A.O., Rome [*Mon. Bull. agric. Econ. FAO*]
Monthly Bulletin of the Coffee Board of Kenya, Nairobi [*Mon. Bull. Coffee Bd Kenya*]
Monthly Weather Report of the Meteorological Office, London [*Mon. Weather Rep. Lond.*]
Mysore Agricultural Calendar, Bangalore [*Mysore agric. Calendar*]
Mysore Agricultural Journal, Bangalore [*Mysore agric. J.*]
N.A.A.S. [National Agricultural Advisory Service] Quarterly Review, London [*N.A.A.S. Quart. Rev.*]
Nachrichtenblatt für den Deutschen Pflanzenschutzdienst, Berlin [*NachrBl. dtsch. PflSchDienst, Berlin*]
Nachrichtenblatt des Deutschen Pflanzenschutzdienstes, Braunschweig [*NachrBl. dtsch. PflSchDienst., Braunschweig*]
National Cactus and Succulent Journal, Bradford [*Nat. Cactus Succ. J.*]
National Horticultural Magazine, Washington, D.C. [*Nat. hort. Mag.*]
National Research Council Review, Ottawa [*Nat. Res. Coun. Rev., Ottawa.*]
Nature, London [*Nature*]
Nature, Leningrad [Russian], *see* Priroda
Naturens Verden, Copenhagen [*Nat. Verd. Kbh.*]
Nebraska Experiment Station Quarterly, Lincoln, Nebraska [*Neb. Exp. Stat. Quart.*]
Nematologica, Leiden [*Nematologica*]
Netherlands Journal of Agricultural Science, Wageningen [*Neth. J. agric. Sci.*]
New Biology, Harmondsworth, Middlesex [*New Biol.*]
New Commonwealth, London [*New Commonw.*]
New Jersey Agriculture, New Brunswick, N.J. [*N.J. Agric.*]
New Phytologist, Cambridge [*New Phytol.*]
New Zealand Commercial Grower, Wellington [*N.Z. Comm. Gr*]
New Zealand Gardener, Wellington [*N.Z. Gdnr*]
New Zealand Journal of Agriculture, Wellington [*N.Z. J. Agric.*]
New Zealand Journal of Science and Technology, Wellington [*N.Z. J. Sci. Tech.*]
Norsk Hagetidend, Oslo [*Norsk Hagetid.*]
Northern Gardener, Manchester [*North. Gdnr*]
Notas Agronomicas. Estación Agrícola Experimental de Palmira, Colombia [*Not. agron. Palmira*]
Notes from the Royal Botanic Garden, Edinburgh, Edinburgh [*Notes roy. bot. Gdn Edinb.*]
Notiziario sulle Malattie delle Piante, Milan [*Not. Mal. Piante*]
Növénytermelés, Budapest [*Növénytermelés*]
Nuovo Giornale Botanico Italiano, Florence [*Nuovo G. bot. ital.*]

Obstrundschau, Oeschberg-Koppigen, Switzerland [*Obstrundschau*]
Official Report of the Annual Meeting and Conference Dominion Council of Commercial Gardeners Ltd., Wellington, N.Z. [*Off. Rep. annu. Mtg Domin. Coun. Comm. Gdnrs, Wellington*]
Ohio Journal of Science, Columbus, Ohio [*Ohio J. Sci.*]
Oléagineux, Marseilles [*Oléagineux*]
Olearia, Rome [*Olearia*]
Orchardist of New Zealand, Wellington [*Orchard. N.Z.*]
Organic Reactions, New York [*Org. React.*]

Pacific Science, Honolulu [*Pacif. Sci.*]
Pakistan Journal of Science, Lahore [*Pak. J. Sci.*]
Pakistan Journal of Scientific Research, Lahore [*Pak. J. sci. Res.*]
Pakistan Review of Agriculture, Karachi [*Pak. Rev. Agric.*]
Pamphlet Tea Research Institute of East Africa, Kericho, Kenya [*Pamphl. Tea Res. Inst. E. Afr.*]
Papua and New Guinea Agricultural Gazette, Port Morseby [*Papua New Guinea agric. Gaz.*]
Parasitica, Gembloux [*Parasitica*]
Park Administration, London [*Park Administ.*]
Pflanzenschutzberichte, Vienna [*PflSch. Ber Wien*]
Philippine Agriculturist, Los Baños, P.I. [*Philipp. Agric.*]
Philippine Journal of Agriculture, Manila, P.I. [*Philipp. J. Agric.*]
Philippine Journal of Science, Manila, P.I. [*Philipp. J. Sci.*]
Physiologia Plantarum, Copenhagen [*Physiol. Plant.*]
Phyton, Buenos Aires [*Phyton*]
Phytopathologische Zeitschrift, Berlin [*Phytopath. Z.*]
Phytopathology, Lancaster, Pa [*Phytopathology*]
Plant Breeding Abstracts, Cambridge [*Plant Breed. Abstr.*]

Plant Disease Reporter (and Supplements), Beltsville, Md [*Plant Dis. Reptr*]
Plant Pathology, London [*Plant Path.*]
Plant Physiology, Lancaster, Pa [*Plant Physiol.*]
Plant Protection Bulletin, F.A.O., Rome [*Plant Prot. Bull. FAO*]
Plant and Soil, The Hague [*Plant and Soil*]
Planta. Archiv für Wissenschaftliche Botanik, Berlin [*Planta*]
Planter, Kuala Lumpur [*Planter, Kuala Lumpur*]
Planters' Bulletin, Rubber Research Institute of Malaya, *see* R.R.I.
Planters' Chronicle, Coimbatore, India [*Plant. Chron.*]
Plants and Gardens, Brooklyn, Lancaster Pa, [*Plants and Gdns*]
Polish Agriculture, *see* Roczniki Nauk Rolniczych
Polish Technical Abstracts [*Polish tech. Abstr.*]
Poljoprivredna Znanstvena Smotra, Zagreb, Yugoslavia [*Poljopr. Znanst. Smot.*]
Poona Agricultural College Magazine, Poona, India [*Poona agric. Coll. Mag.*]
Portugaliae Acta Biologica, Series A, Lisbon [*Portugal. Acta biol.*]
Potash Review, Berne [*Pot. Rev.*]
Preslia, Prague [*Preslia*]
Priroda (Nature) Leningrad [Russian] [*Priroda*]
Proceedings of the Academy of Sciences of the U.S.S.R. [Russian], *see* Doklady Akad. Nauk SSSR
Proceedings and Abstracts of the Western Canadian Weed Control Conference Meetings held at different places [*Proc. and Abstr. west. Canad. Weed Contr. Conf.*]
Proceedings of the American Pomological Society, meetings held at different places, U.S.A. [*Proc. Amer. pomol. Soc.*]
Proceedings of the American Society for Horticultural Science, meetings at different places, U.S.A. [*Proc. Amer. Soc. hort. Sci.*]
Proceedings of the American Society of Sugar Cane Technologists, New Orleans [*Proc. Amer. Soc. Sugar Cane Tech.*]
Proceedings of the Annual California Weed Conference, San Luis Obispo [*Proc. annu. Calif. Weed Conf.*]
Proceedings of the Annual Conference of the United Planters Association of South India, Tea Scientific Section, Madras [*Proc. U.P.A.S. annu. Conf.*]
Proceedings of the Annual Congress of the South African Sugar Technologists' Association, Mount Edgecombe, Natal [*Proc. annu. Congr. S. Afr. Sugar Tech.*]
Proceedings of the Annual Meeting of the North Central Weed Control Conference, Milwaukee, Wisconsin [*Proc. annu. Mtg N. centr. Weed Control Conf.*]
Proceedings Annual Research Conference California Fig Institute, Fresno [*Proc. annu. Res. Conf. Calif. Fig Inst.*]
Proceedings British Weed Control Conference, London [*Proc. Brit. Weed Contr. Conf.*]
Proceedings of the Florida State Horticultural Society, meetings held at different places [*Proc. Fla St. hort. Soc.*]
Proceedings of the Helminthological Society of Washington, Beltsville, Md [*Proc. helm. Soc. Wash.*]
Proceedings of the Indian Academy of Sciences, Section B, Bangalore [*Proc. Indian Acad. Sci. Sect. B*]
Proceedings of the Lenin Academy of Agricultural Sciences of U.S.S.E. [Russian], *see* Doklady Vsesojuznoĭ . . .
Proceedings of the Linnean Society of London, London [*Proc. Linn. Soc. Lond.*]
Proceedings of the Meeting of the B.W.I. Sugar Technologists, meetings held at different places, B.W.I. [*Proc. Mtg B.W.I. Sugar Tech.*]
Proceedings of the Meeting of the Eastern Section, National Weed Committee, Ottawa [*Proc. Mtg East. Sect. nat. Weed Cttee Ottawa*]
Proceedings of the New York State Horticultural Society, New York [*Proc. N. York St. hort. Soc.*]
Proceedings New Zealand Weed Control Conference, Wellington [*Proc. N.Z. Weed Contr. Conf.*]
Proceedings of the North Eastern States Weed Control Conference, U.S.A. [*Proc. N.E. States Weed Control Conf.*]
Proceedings of the Northern Nut Growers' Association (U.S.A.) [*Proc. north. Nut Grs' Ass.*]
Proceedings of the Oklahoma Academy of Sciences, Normal, Oklahoma [*Proc. Okla Acad. Sci.*]
Proceedings of the Pennsylvania State Horticultural Association, State College [*Proc. Pa St. hort. Ass.*]
Proceedings of the Queensland Society of Sugar Cane Technologists, Mackay, Queensland [*Proc. Qd Soc. Sugar Cane Tech.*]
Proceedings of the Royal Institution of Great Britain, London [*Proc. roy. Instn G.B.*]
Proceedings of the Royal Society. Series B. London [*Proc. roy. Soc. Ser. B*]
Proceedings of the Soil Science Society of America, Morgantown, West Virginia [*Proc. Soil Sci. Soc. Amer.*]
Proceedings Soil Science Society of Florida, Belle Glade, Florida [*Proc. Soil Sci. Soc. Fla*]
Proceedings of the Southern Weed Conference, U.S.A. [*Proc. south. Weed Conf.*]
Proceedings of the Utah Academy of Sciences, Provo [*Proc. Utah Acad. Sci.*]
Proceedings Washington State Horticultural Association, Pullman [*Proc. Wash. St. hort. Ass.*]
Proceedings Western Weed Control Conference U.S.A. [*Proc. west. Weed Control Conf.*]
Proceedings of the Zoological Society of Bengal, Calcutta [*Proc. zool. Soc. Bengal*]
Progres Agricole et Viticole, Montpellier, France [*Progr. agric. vitic.*]
Progress Report[s] of the Canadian Agricultural Experimental Stations and Farms, Ottawa, Summerland and elsewhere [*Progr. Rep. Canad. agric. exp. Stats*]
Progress Report European Plant Protection Organisation, Paris [*Progr. Rep. E.P.P.O.*]
Progress Report Institute of Plant Industry, Indore [*Progr. Rep. Inst. Plant Ind., Indore*]
Progress Report N.A.A.S. Experimental Husbandry Farms, London [*Progr. Rep. N.A.A.S. exp. Husb. Fms*]
Publicacion Miscelanea Estacion Experimental Agricola de Tucumán, Argentina [*Publ. misc. Estac. exp. agric. Tucumán*]
Pubblicazioni dell'Istituto di Patologia Vegetale, Università di Milano, Milan [*Pubbl. Ist. Pat. veg. Univ. Milano*]
Publications and Patents of the Eastern Regional Research Laboratory, Bureau of Agricultural and Industrial Chemistry, Agricultural Research Administration, U.S. Department of Agriculture, Philadelphia, Pa [*Publ. east. reg. Res. Lab. Phil.*]
Punjab Fruit Journal, Lyallpur, Pakistan [*Punjab Fruit J.*]
Pyrethrum Post, London [*Pyreth. Post*]

Quarterly Bulletin California Department of Agriculture, *see* Bulletin
Quarterly Bulletin of the International Association of Agricultural Librarians and Documentalists, Harpenden, Herts. [*Quart. Bull. int. Ass. agric. Libr.*]
Quarterly Bulletin Michigan Agricultural Experiment Station, East Lansing, Mich. [*Quart. Bull. Mich. agric. Exp. Stat.*]
Quarterly Circular, Rubber Research Institute of Ceylon, Agalawatta [*Quart. Circ. Rubb. Res. Inst. Ceylon*]
Quarterly Journal of the Royal Meteorological Society, London [*Quart. J. roy. met. Soc.*]
Quarterly Progress Report West Africa Cocoa Research Institute, Tafo, Gold Coast [*Quart. Progr. Rep. W.A.C.R.I.*]
Quarterly Progress Report West African Institute for Oil Palm Research, Benin [*Quart. Progr. Rep. West Afr. Inst. Oil Palm Res.*]
Quarterly Review of Agricultural Economics, Canberra, A.C.T. [*Quart. Rev. agric. Econ., Canberra*]
Quarterly Review of Biology, Baltimore, Md [*Quart. Rev. Biol.*]

Quarterly Reviews, The Chemical Society, London [*Quart. Rev. chem. Soc. Lond.*]
Queensland Agricultural Journal, Brisbane [*Qd agric. J.*]
Queensland Journal of Agricultural Science, Brisbane [*Qd J. agric. Sci.*]

Radovi Poljoprivredno-Šumarskog Fakulteta Univerziteta u Sarajevu, Sarajevo, Yugoslavia [*Rad. Poljopriv. Sumarskog Fak. Sarajevo*]
Rapport d'Activité Station Fédérale d'Essais Agricoles, Lausanne, Switzerland [*Rapp. Stat. féd. Ess. agric. Lausanne*]
Rapport Annuel de l'Institut pour l'Encouragement de la Recherche Scientifique dans l'Industrie et l'Agriculture, Belgium [*Rapp. annu. I.R.S.I.A.*]
Rapport Annuel Institut National pour l'Étude Agronomique du Congo Belge, Leopoldville [*Rapp. annu. I.N.É.A.C.*]
Rapport Annuel Institut des Recherches sur le Caoutchouc en Indochine, Laikhê [*Rapp. annu. Inst. Rech. Caoutchouc Indochine*]
Rapport Annuel Institut de Recherches pour les Huiles et Oléagineux, Paris [*Rapp. annu. Inst. Rech. Huiles, Paris*]
Rapport Annuel de la Société de Pomologie . . . de la Province de Québec, Montreal [*Rapp. annu. Soc. Pom. Québec*]
Rapport du Conseil de l'Expérimentation at des Recherches Agronomiques, Algérie, Alger [*Rapp. Cons. Exp. Rech. Algér.*]
Rapport Général Centre de Recherches de la Ligue Pomologique pour la Défense du Fruit Belge, Huy, Belgium [*Rapp. gén. Centre Rech. Ligue pomol. Déf. Fruit belge*]
Rapport du Service Botanique et Agronomique de Tunisie, Tunis [*Rapp. Serv. bot. agron. Tunis.*]
Rapport Station Centrale des Cultures Fruitières, Institut des Fruits et Agrumes, Kindia, Guinée Française [*Rapp. Stat. centr. Cult. fruit. Kindia*]
Rapport de la Station Provinciale de Recherches Scientifiques de Viticulture, La Hulpe, Belgium [*Rapp. Stat. Rech. sci. Vitic. La Hulpe*]
Record of Investigations, Uganda Department of Agriculture, Entebbe [*Rec. Invest. Uganda Dep. Agric.*]
Records of the Agricultural Research Station, Rehovot, *see* Ktavim
Records of Researches in the Faculty of Agriculture, University of Tokyo, Tokyo [*Rec. Res. Fac. Agric. Tokyo*]
Report on the Agricultural Experiment Stations, U.S. Department of Agriculture, Washington, D.C. [*Rep. agric. Exp. Stats U.S. Dep. Agric.*]
Report Annual Date Growers' Institute, Coachella Valley, California [*Rep. annu. Date Grs' Inst.*]
Reports Annual Meeting Hawaiian Sugar Planters Association, Honolulu [*Rep. annu. Mtg Hawai. sugar Plant. Ass.*]
Report on Cacao Research, Imperial College of Tropical Agriculture, Trinidad [*Rep. Cacao Res. I.C.T.A.*]
Report of the Canadian Committee on Fruit and Vegetable Preservation, Ottawa [*Rep. Canad. Cttee Fruit Veg. Pres.*]
Reports of Cocoa Conferences, London and elsewhere [*Rep. Cocoa Conf.*]
Report of the Council of F.A.O., Rome [*Rep. Coun. F.A.O.*]
Report of the Director-General, F.A.O., Rome [*Rep. Dir.-Gen. F.A.O.*]
Report Eastern Section, National Weed Committee, Herbicide Committee, Ottawa [*Rep. east. Sect. nat. Weed Cttee Ottawa*]
Report on Forest Research, London [*Rep. For. Res.*]
Report Hawaiian Sugar Planters' Association Experiment Station Committee, Honolulu [*Rep. Hawaian Sugar Exp. Stat.*]
Report Horticultural Experiment Station and Products Laboratory Ontario Department of Agriculture, Vineland [*Rep. hort. Exp. Stat. Vineland*]
Report Illinois Agricultural Experiment Station, Urbana [*Rep. Ill. agric. Exp. Stat.*]
Report Iowa Agricultural Experiment Station, Ames, Iowa [*Rep. Ia agric. Exp. Stat.*]
Report of the Iowa Division of Agriculture, Ames [*Rep. Ia Div. Agric.*]
Report Irrigation Research Stations, Murray and Murrumbidgee Areas, Commonwealth Scientific and Industrial Research Organization, East Melbourne, Victoria [*Rep. Irrig. Res. Stats Murray and Murrumbidgee Areas*]
Report on the Meteorology of British Guiana, Georgetown [*Rep. Met. Brit. Guiana*]
Report of the Nature Conservancy, London [*Rep. Nature Conserv. Lond.*]
Report of Proceedings of the Annual Meeting of the Western Canadian Society of Horticulture, held at different places [*Rep. Proc. west. Canad. Soc. Hort.*]
Reports on the Progress of Applied Chemistry, London [*Rep. Progr. appl. Chem. Lond.*]
Report of Progress Tobacco Research Board of Southern Rhodesia, Salisbury [*Rep. Progr. Tobacco Res. Bd Salisbury*]
Report of the Quebec Society for the Protection of Plants, Quebec [*Rep. Que. Soc. Prot. Plants*]
Report of the Secretary of Agriculture, Washington, D.C. [*Rep. Sec. Agric. Wash. D.C.*]
Report School of Agriculture, Sutton Bonington, Sutton Bonington [*Rep. School Agric. Sutton Bonington*]
Report Soil Survey Research Board, Agricultural Research Council, London [*Rep. Soil Surv. Res. Bd, A.R.C., Lond.*]
Report Taiwan Sugar Experiment Station, Formosa [*Rep. Taiwan Sugar Exp. Stat.*]
Report Waite Agricultural Research Institute, Glen Osmond, South Australia [*Rep. Waite agric. Res. Inst. S. Aust.*]
Report Western Section, National Weed Committee, Recommendations Committee, Ottawa [*Rep. west. Sect. nat. Weed Cttee Ottawa*]
Report of Work of the Ceylon Rubber Research Board, Colombo [*Rep. Work Rubb. Res. Bd, Ceylon*]
Research, London [*Research, Lond.*]
Research and Experimental Record of the Ministry of Agriculture, Northern Ireland, Belfast [*Res. exp. Rec. Minist. Agric. Belfast*]
Research and Farming, Raleigh, North Carolina [*Res. and Fmg N.C.*]
Research in Norwegian Agriculture, *see* Forskning og Forsøk i Landbruket
Research Progress Report Western Weed Control Conference U.S.A. [*Res. Progr. Rep. west. Weed Control Conf.*]
Research Report National Weed Committee, Western Section, Ottawa [*Res. Rep. nat. Weed Cttee, west. Sec. Ottawa*]
Research Report North Central Weed Control Conference, U.S.A. [*Res. Rep. N. centr. Weed Control Conf.*]
Research Studies of the State College of Washington, Pullman [*Res. Stud. Wash. St. Coll. Pullman*]
Research in Review, Amherst, Mass. [*Res. Rev.*]
Review of Applied Entomology. A. Agricultural, London [*Rev. appl. Ent.*]
Review of Applied Mycology, Kew [*Rev. appl. Mycol.*]
Review of Research Work at the Faculty of Agriculture, University of Belgrade, *see* Sbornik Radova Poljoprivrednog Fakultata
Revista de Agricultura, Cochabamba, Bolivia [*Rev. Agric. Cochabamba*]
Revista de Agricultura, Habana [*Rev. Agric. Habana*]
Revista de Agricultura, Piracicaba, São Paulo [*Rev. Agric. Piracicaba*]
Revista Agronómica, Publicação da Sociedade de Ciencias Agronómicas de Portugal, Lisbon [*Rev. agron. Lisboa*]
Revista Argentina de Agronomía, Buenos Aires [*Rev. argent. Agron. B. Aires*]
Revista de la Asociación de Ingenieros Agronomos, Montevideo [*Rev. Asoc. Ingen. agron. Montevideo*]

Revista do Café Portugûes, Lisbon [*Rev. Café portug.*]
Revista Ceres, Minas Gerais, Brazil [*Rev. Ceres*]
Revista de la Facultad de Agricultura de la Universidad Central de Venezuela, Caracas [*Rev. Fac. Agric. Univ. Venezuela*]
Revista de la Facultad de Agronomía, Universidad Nacional de la Ciudad Eva Perón, Argentina [*Rev. Fac. Agron. Eva Perón*]
Revista de la Facultad de Agronomía y Veterinaria, Buenos Aires [*Rev. Agron. B. Aires*]
Revista de la Facultad de Ciencias Agrarias, Mendoza, Argentina [*Rev. Fac. Cien. agrar. Mendoza*]
Revista Facultad Nacional de Agronomía, Medellín, Colombia [*Rev. Fac. nac. Agron. Medellín*]
Revista Industrial y Agrícola de Tucumán, Argentina [*Rev. industr. agric. Tucumán*]
Revista del Instituto Agrícola Catalán de San Isidro, Barcelona [*Rev. Inst. agríc. catal.*]
Revista de Investigaciones Agrícolas, Buenos Aires [*Rev. Invest. agríc. B. Aires*]
Revue Agricole de l'Isle de Réunion, Saint-Denis [*Rev. agric. Réunion*]
Revue Agricole et Sucrière de l'Ile Maurice, Port Louis [*Rev. agric. sucr. Maurice*]
Revue de l'Agriculture, Bruxelles [*Rev. Agric. Brux.*]
Revue Générale du Caoutchouc, Paris [*Rev. gén. Caoutch.*]
Revue Horticole, Paris [*Rev. hort. Paris*]
Revue Horticole de l'Algérie, Alger. [*Rev. hort. Algér.*]
Revue Horticole Suisse, Geneva [*Rev. hort. suisse*]
Revue Internationale des Industries Agricoles, Paris [*Rev. int. Ind. agric.*]
Revue d'Oka, Agronomie, Médécine, Vétérinaire, La Trappe, Québec [*Rev. d'Oka*]
Revue Romande d'Agriculture, de Viticulture, et d'Arboriculture, Lausanne, Switzerland [*Rev. romande Agric. Vitic.*]
Rhodesia Agricultural Journal, Salisbury [*Rhod. agric. J.*]
Rhodesian Tobacco, Salisbury [*Rhod. Tobacco*]
Rhododendron und immergrüne Laubgehölze Jahrbuch, Bremen [*Rhodod. Jb.*]
Rhododendron Year Book, London [*Rhodod. Yearb. Lond.*]
Rivista di Agricoltura Subtropicale e Tropicale, Florence [*Riv. Agric. subtrop.*]
Rivista di Agrumicoltura, Acireale, Sicily [*Riv. Agrum.*]
Rivista di Ecologia, Perugia [*Riv. Ecol.*]
Rivista della Ortoflorofrutticoltura Italiana, Florence [*Riv. Ortoflorofruttic. ital.*]
Rivista di Viticoltura e di Enologia, Conegliano, Italy [*Riv. Vitic. Enol.*]
Roczniki Nauk Rolniczych, Warsaw, Series A and D [*Roczn. Nauk rol.*]
Rose Annual, London [*Rose Annu. Lond.*]
Rostlinná Výroba *see* Sbornik Československé
R.R.I. Planters' Bulletin. Rubber Research Institute, Malaya, Kuala Lumpur [*R.R.I. Plant. Bull.*]
Rubber Developments, London [*Rubb. Developm.*]
Rural Research in C.S.I.R.O., Melbourne [*Rur. Res. C.S.I.R.O.*]

Saatgutwirtschaft, Stuttgart [*Saatgut-Wirtsch.*]
Sad i Ogorod (Horticulture), Moscow [Russian] [*Sad i Ogorod*]
Sborník Československé Akademie Zemědělských Věd, Rostlinná Výroba, Prague [*Sborn. čsl. Akad. Zeměd, Věd, Rostl. Výroba*]
Sborník Vysoké Školy Zemědělské a Lesnické Fakulty v Brně, Brno, Czechoslovakia, *see* Acta Universitatis Agriculturae . . .
Schweizerische Gärtnerzeitung, Zürich [*Schweiz. Gärtnerztg*]
Schweizerische Zeitschrift für Obst- und Weinbau, Wädenswil [*Schweiz. Z. Obst- u. Weinb.*]
Science, New York [*Science*]
Science Bulletin of the Faculty of Agriculture, Kyushu University, Fukuoka, Japan [*Sci. Bull. Fac. Agric. Univ. Kyushu*]
Science and Culture, Calcutta [*Sci. and Cult.*]
Science for the Farmer, State College, Pennsylvania [*Science for the Farmer*]
Science Progress, London [*Sci. Progr.*]
Scientific Horticulture, publication of Horticultural Education Association, Sec. Long Ashton, Bristol [*Sci. Hort.*]
Scientific Reports of the Faculty of Agriculture, Okayama University, Okayama, Japan [*Sci. Rep. Fac. Agric. Okayama Univ.*]
Scientific Reports of the Indian Agricultural Research Institute, New Delhi [*Sci. Rep. Indian agric. Res. Inst.*]
Scottish Agriculture, Edinburgh [*Scot. Agric.*]
Seed World, Chicago [*Seed World*]
Sementi elette, Bologna [*Sementi elette*]
Socialist Agriculture [Russian], *see* Socialističeskoe . . .
Socialističeskoe Seljskoe Hozjaïstvo (Socialist Agriculture), Moscow [Russian] [*Social. seljsk. Hoz.*]
Socialistické Zemědělství, Prague [*Social. Zeměd.*]
Soil Conservation, Washington, D.C. [*Soil Conserv.*]
Soil Science, New Brunswick, N.J. [*Soil Sci.*]
Soils and Fertilizers, Rothamsted [*Soils and Ferts*]
South African Journal of Science, Johannesburg [*S. Afr. J. Sci.*]
South African Sugar Journal, Durban [*S. Afr. Sugar J.*]
South Indian Horticulture, Coimbatore [*South Indian Hort.*]
Stain Technology, Geneva, N.Y. [*Stain Tech.*]
Suelo Tico, San José, Costa Rica [*Suelo Tico*]
Sugar, New York [*Sugar, N. York*]
Sugar Bulletin Department of Agriculture, British Guiana, Georgetown [*Sugar Bull. Dep. Agric. Brit. Guiana*]
Sugar Journal, New Orleans, La [*Sugar J.*]
Sugar News, Manila [*Sugar News*]
Summary of Annual Reports Science Service and Experimental Farms Service, Summerland, B.C. [*Summ. A.Rs Summerland*]
Suomalaisen Eläin- ja Kasvitieteellisen Seuran Vanamon, Kasviteellisiä Julkaisuja. [Annales Botanici Societatis Zoologicae-Botanicae Fennicae Vanamo), Helsinki [*Ann. (bot.) Soc. Vanamo*]
Suomalaisen Eläin- ja Kasvitieteellisen Seuran Vanamon, Eläintieteellisiä Julkaisuja. (Annales Zoologici Societatis Zoologicae-Botanicae Fennicae Vanamo), Helsinki [*Ann. (zool.) Soc. Vanamo*]
Suomalaisen Eläin- ja Kasvitieteellisen Seuran Vanamon, Tiedonnannot (Archivum Societatis Zoologicae Botanicae Fennicae "Vanamo"), Helsinki [*Arch. Soc. zool. bot. fenn. Vanamo*]
Suomalaisen Tiedeakatemian Toimituksia. (Annales Academiae Scientiarum Fennicae) Ser. A. IV. Biologica, Helsinki [*Suom. Tiedeakat. Toim. Biol.*]
Suomalaisen Tiedeakatemian Toimituksia. (Annales Academiae Scientiarum Fennicae) Ser. A. II. Chemica, Helsinki [*Suom. Tiedeakat. Toim. Chem.*]
Suomen Hyönteistieteellinen Aikakauskirja (Annales Entomologici Fennici), Helsinki [*Suom. Hyönteist. Aikakausk.*]
Surinaamse Landbouw, Paramaribo [*Surinaam. Landb.*]
Svensk Geografisk Årsbok, Lund [*Svensk geogr. Årsb.*]
Sveriges Pomologiska Förenings Årsskrift, Stockholm [*Sver. pomol. Fören. Årsskr.*]

Tabacco, Rome [*Tabacco*]
Tabak, Moscow [Russian] [*Tabak*]
Taiwania, Taipei, Taiwan, China [*Taiwania*]
Tasmania Journal of Agriculture, Hobart [*Tasm. J. Agric.*]
Tätigkeitsbericht Bundesanstalt für Qualitätsforschung pflanzlicher Erzeugnisse, Geisenheim/Rheingau [*Tätigkeitsber. Bundesanst. Qualitätsforsch. Geisenheim*]
Tätigskeitsbericht der Gärtnerischen Versuchsanstalt zu Friesdorf/Bad Godesberg [*TätigskBer. gärtn. Versuchsanst. Friesdorf*]
Tea Quarterly, Journal of the Tea Research Institute of Ceylon, Talawakelle [*Tea Quart.*]
Technical Bulletin of the Kagawa Agricultural College, Kagawaken, Japan [*Tech. Bull. Kagawa agric. Coll.*]

Technical Digest, Washington and Ottawa [*Tech. Dig.*]
Technik und Landwirtschaft, Heidelberg [*Techn. Landw.*]
Tekel Enstitüleri Raporlari, Istanbul [*Tekel Enst. Raporlari*]
Terre Marocaine, Casablanca [*Terre maroc.*]
Tidsskrift for Planteavl, Copenhagen [*Tidsskr. Planteavl*]
Tijdschrift over Plantenziekten, Wageningen [*Tijdschr. PlZiekt.*]
Transactions of the British Mycological Society, Cambridge [*Trans. Brit. mycol. Soc.*]
Transactions and Proceedings of the Botanical Society of Edinburgh, Edinburgh [*Trans. bot. Soc. Edinb.*]
Transactions of the Illinois State Horticultural Society and the Illinois Fruit Council, Carbondale [*Trans. Ill. St. hort. Soc.*]
Tropical Abstracts, Amsterdam [*Trop. Abstr.*]
Tropical Agriculture. Journal of the Imperial College of Tropical Agriculture, Port of Spain [*Trop. Agriculture Trin.*]
Tropical Agriculturist and Magazine of the Ceylon Agricultural Society, Peradeniya [*Trop. Agriculturist*]
Tropical Woods, New Haven, Conn. [*Trop. Woods*]
Trudy Instituta Fiziologii Rastenii imeni K. A. Timiriazeva, Moscow [*Trud Inst. Fiziol. Rast. Timiriazeva*]
Tuinbouwgids, The Hague [*Tuinbouwgids*]
Tuinbouwtechniek, Wageningen [*Tuinbouwtech.*]
Tuinbouwvoorlichting, The Hague [*Tuinbouwvoorl.*]
Tunisie Agricole, Tunis [*Tunis agric.*]
Turrialba, Costa Rica [*Turrialba*]
Two and a Bud, Newsletter by Tocklai Experimental Station, Tocklai [*Two and a Bud*]

Växtodling, Uppsala [*Växtodling*]
Växtskyddsnotiser, Stockholm [*Växtskyddsnotiser*]
Vegetatio Acta Geobotanica, The Hague [*Vegetatio, Haag*]
Verksamhetsåret Föreningen för växtförädling av fruktträd, Balsgård, Sweden [*Verksamhetsåret Fören. Växtförädl. Frukt. Balsgård*]
Veröffentlichungen der Bundesanstalt für Alpine Landwirtschaft in Admont, Austria [*Veröff. Bundesanst. alpine Landw. Admont*]
Verslag Departement van Landbouw, Veeteelt en Visserij, Suriname, Paramaribo [*Versl. Dep. Landb. Suriname*]
Verslag van het Landbouwproefstation en Bodemkundig Instituut T.N.O., Groningen [*Versl. Landbproefst. T.N.O.*]
Verslag van het Rijkstuinbouwconsulentschap te Kesteren, Holland [*Versl. Rijkstuinbconsul. Kesteren*]
Verslag van de Stichting "Boom en Vrucht" te Opheusden, Holland [*Versl. Boom en Vrucht Opheusden*]
Verslag Westvlaamse Proeftuin, Rumbeke-Beitem [*Versl. Westvl. Proeft. Rumbeke-Beitem*]
Verslagen en Mededelingen, *see under* Mededelingen
Versuchsergebnisse der Bundesversuchsanstalt für alpenländische Landwirtschaft Gumpenstein (Austria) [*Versuchsergebn. alpenländ. Landw. Gumpenstein*]
Vinodelie i Vinogradarstvo (Viticulture and Wine-making), Moscow [Russian] [*Vitic. and Wine-mak.* (Russian)]
Virology, New York [*Virology*]

Wallerstein Laboratories Communication, New York [*Wallerstein Lab. Commun.*]
Weather, London [*Weather*]
Weed Abstracts, Oxford [*Weed Abstr.*]
Weeds, New York [*Weeds, N. York*]
Wine-making and Viticulture [Russian], Moscow, *see* Vinodelie i Vinogradarstvo
Wisconsin Horticulture, Madison, Wis. [*Wis. Hort.*]
World Crops, London [*World Crops*]

Yearbook of Agriculture, U.S. Department of Agriculture, Washington, D.C. [*Yearb. Agric. U.S. Dep. Agric.*]
Yearbook California Avocado Society, Los Angeles [*Yearb. Calif. Avoc. Soc.*]
Yearbook of Food and Agricultural Statistics, F.A.O., Rome [*Yearb. Fd agric. Statist.*]
Yearbook of the Royal Veterinary and Agricultural College, Copenhagen [*Yearb. roy. vet. agric. Coll. Copenhagen*]

Zashtita Bilja (Plant Protection), Belgrade [*Zasht. Bilja*]
Zbornik Radova Poljoprivrednog Fakultata Beograd [*Zborn., Rad. poljopriv. Fak. Belgrade*]
Zeitschrift für Pflanzenernährung, Düngung, Bodenkunde Weinheim and Berlin [*Z. PflErnähr. Düng.*]
Zeitschrift für Pflanzenkrankheiten, Stuttgart [*Z. PflKrankh.*]
Zemledelie, Kiev (Russian) [*Zemled. Kiev*]
Zemljište i Biljka (Soil and Plant), Belgrade [*Zemlj. Bilj.*]
Zentralblatt für Bakteriologie, Parasitenkunde, Infektionskrankheiten und Hygiene, 11 Abt., Jena [*Zbl. Bakt.*]
Zoological Record. Section Insecta, London [*Zool. Rec. Sect. Insect.*]
Züchter, Berlin [*Züchter*]

PRINTED BY HEADLEY BROTHERS LTD 109 KINGSWAY LONDON WC2 AND ASHFORD KENT